

QUARTERLY SUMMARY
OF THE
IMPROVEMENTS AND DISCOVERIES
IN THE
MEDICAL SCIENCES.

ANATOMY AND PHYSIOLOGY.

1. *Absence of the Pericardial Sac, the Heart lying in the Cavity of the Left Pleura.*—Dr. BAILY exhibited to the Pathological Society of London (May 20, 1851) a specimen of this rare malformation.—The subject of it was a man, æt. 32, measuring about five feet six inches in height, and of rather feeble frame: he died the 17th of May, 1851, in Milbank Prison, where he had been confined since the 16th December, 1850. Previous to his committal to Knutsford Gaol, in November 1850, he had followed the calling of a gardener. For nearly three months after his reception at Milbank he remained under the ordinary discipline of the prison, working as a tailor, and taking exercise for an hour daily. When admitted to the Infirmary of the prison, on the 7th March, he complained of cough and diarrhœa, had lost flesh, and was found to be the subject of pulmonary consumption. On the 26th March, symptoms of tubercular peritonitis supervened, and his emaciation became more rapid: he died in a state of extreme exhaustion.

While under observation at Milbank Prison, he presented no appearance indicative of obstructed or disordered circulation, and suffered from no more dyspœa than usually attends tubercular disease of the lungs. His pulse was always regular, and its number, except during the last few days of his life, not more than 92; and, on the occasion when his chest was examined, soon after his admission to the Infirmary, nothing abnormal was detected in the action and sounds of the heart.

After death, there was found extensive tubercular disease of both lungs, and general cohesion of all the abnormal viscera by firm false membranes containing innumerable tubercles. The right lung, also, was universally adherent to the reflected pleura. The left lung was adherent at its summit, but in the rest of its extent was free; and, when the sternum and cartilages of the ribs were raised, it was at once noticed that the heart, having no separate sac to enclose it, was in close contact with this lung, and had at the same time no abnormal connection with the diaphragm: the heart and left lung lay, in fact, in one serous sac, the membrane forming which was reflected upon the surface of either organ, constituting in the one case the pulmonary pleura, in the other the visceral pericardium. This serous membrane, traced in the horizontal direction, after lining the sternum and the ribs on the left side, covering the posterior and outer surfaces of the lung, and then its inner surface, was reflected at the root of the lung directly upon the left pulmonary veins, and thus reached the base of the heart. After investing this organ, and the vessels arising from and around it, to the normal extent, it passed forward to the sternum, being here separated from a corresponding layer of the right pleura only, by a thick layer of fibrous and cellular tissue. The part of the diaphragm on which the heart and the left lung rested, being covered with the same serous membrane, formed the base of the large sac in which they lay.

Beneath and behind the heart, the serous membrane, where it passed from the base of the heart to the diaphragm, formed a crescentic fold. This fold, thickened by fibrous tissues between its layers, arose on the right side of the ascending aorta, passed downwards to the right of the right auricle, and in front of the inferior vena cava, and, crossing behind the left auricle, terminated on the left pulmonary veins. The depth of this crescentic fold was greatest posteriorly, but did not there exceed three quarters of an inch, except close to the vena cava, where the finger could be passed into a pouch behind it to the depth of an inch and a half. Below, and to the right of this crescentic fold of membrane, which, there can be little doubt, was a rudiment of the pericardial sac, fungi-like processes of brownish and loose fat, like that which commonly occupies the anterior mediastinum, projected into the cavity of the serous sac.

Another peculiarity was, that the left phrenic nerve, entering the thorax in the normal situation, instead of passing down between the heart and left lung, crossed in front of the arch of the aorta to reach the septum, between the two pleural sacs on the right of the heart, when it passed downwards, and, reaching the diaphragm, took a direction towards the left side.

A third fact noticed was that a thin and fragile false membrane, evidently the product of recent inflammation, covered the inner surface of the left lung, and that a similar false membrane invested to some extent the corresponding left side of the heart; a slight adhesion, of small extent, and easily ruptured, also existing between the apex of the heart and the contiguous surface of the lung.

The visceral pericardium, or the serous covering of the heart itself, was generally smooth, thin, and free from white spots. The heart was of normal size, and its valves were healthy.

Cases of congenital absence of the pericardial sac are confessedly very rare. Only two seem to have been recorded as having occurred in this country: one by Dr. Baillie (in the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, vol. i. p. 91); the other by Mr. T. B. Curling (in the 22d vol. of the "Med.-Chir. Trans.," p. 222). An exact account of a third case has been given by Breschet ("Répert. Gén. d'Anatomie," tom. i. p. 212); and references to a few others, less minutely described, and some of them not well characterized, will be found in Otto's "Pathological Anatomy" (transl. by South, p. 254).

In Breschet's case, and in Mr. Curling's, rudiments of a pericardial sac similar to those observed in the present instance existed behind the heart. In Dr. Baillie's case this appears to have been absent. In all three of these cases the left phrenic nerve took the abnormal course towards the right side of the heart, before descending to the diaphragm. And it may not be uninteresting likewise to notice, with reference to one suggested purpose of the pericardium—namely, the protection of the heart from inflammation which might otherwise extend to it from the lung or pleura—that while, in the present case, there were traces of recent inflammation of the serous membranes covering the contiguous surfaces of the heart and lung, in Mr. Curling's case there was a slight adhesion between the apex of the heart and the left lung, with partial thickening of the serous covering of both; and in Breschet's case were two slender adhesions between the heart and the diaphragm (see Mr. Curling's observations on this point, *loc. citat.* p. 229).

It remains only to state that, although the fibrous structure of the pericardial sac was to so great an extent absent, yet a thick fibrous stratum strengthened the serous membrane behind, and to the right side of the base of the heart, and descended to form with the tendinous portion of the diaphragm the same close connection which naturally exists between the fibrous pericardium and the central tendon of that muscle.—*London Medical Gazette*, July 4, 1851.

2. *On the Persistence of Vital Properties in Limbs in the state of Cadaveric Rigidity.*—M. BROWN-SEQUARD forwarded a note in which he stated that he had recently found that limbs, in the condition usually known as that of post-mortem or cadaveric rigidity, may still be living—i. e., they may cease to be rigid,

may re-acquire muscular irritability and sensibility, and may be moved by the power of the will.*

The following is an abstract of these researches:—

In the body of a guinea-pig which had been in a state of rigidity from ten to twenty minutes, he had divided the aorta and vena cava at the point of bifurcation of those vessels. This done, he had brought the distant portions of these vessels, by means of a quill or glass tube, into communication with the aorta and vena cava of a living animal of the same species. The blood of the living animal has thus been made to circulate in the lower limbs of the dead animal. At the end of about eight minutes, the cadaveric rigidity of the lower limbs had disappeared, and, two or three minutes later, movements have been excited by irritating the limbs or nerves.

It follows from this experiment that the nerves and muscles, having lost their excitability, may regain these properties under the influence of blood, even where the rigidity has lasted a quarter of an hour.

The same result has been obtained by a more easy experiment. Having cut the body of a guinea-pig into two at the level of the lower border of the kidneys, leaving no communication between the two halves, except by the aorta and vena cava, M. Brown-Sequard then tied the aorta immediately below the origin of the renal arteries. The muscular irritability gradually diminished little by little, and gave way to cadaveric rigidity in between fifteen and forty minutes after the ligature of the aorta. After the rigidity had lasted fifteen or twenty minutes, the ligature was relaxed, the circulation was re-established in the posterior segment, and the rigidity was observed to disappear gradually, the muscles and nerves resuming their excitability.

Lastly, in order to ascertain if voluntary movements can be restored to limbs that have been in a state of cadaveric rigidity, M. Brown-Sequard has tied the aorta immediately below the origins of the renal arteries in healthy rabbits. The sensibility of the posterior portions of the body has been lost in six, eight, or ten minutes; two minutes later all voluntary movement has ceased. The irritability has lasted an hour. Rigidity has supervened in from an hour to an hour and twenty minutes after the ligature of the aorta. The rigidity was permitted to continue for twenty minutes, and then the ligature was relaxed. The circulation, and with it the functions of the nerves and muscles, were re-established.

The author concluded with these propositions:—

1. That muscles are not necessarily dead because they exhibit cadaveric rigidity—that, if they are not actually alive, they have the faculty of living.
2. That want of circulation of the blood deprives the muscles and nerves of their functions: the restoration of the circulation restores these.
3. That, notwithstanding the duration of rigidity shall have been as long as twenty minutes, sensibility and voluntary movements may be restored.—*London Medical Gazette*, July 18, 1851.

MATERIA MEDICA AND PHARMACY.

3. *On Antiseptics.* By MM. AUGEND and ROBIN.—In a memoir recently transmitted from Constantinople to the *Académie des Sciences*, M. Augend details a great variety of experiments he has been making upon the comparative antiseptic powers of ether and chloroform, which show those of the latter to be pre-eminently superior. To completely prevent the decomposition of a piece of fresh meat, $\frac{1}{100}$ th part of chloroform sufficed. Its vapour traverses the densest tissues. It does not coagulate albumen like creasote, and is not decomposed by the muscular fibre. The most obvious action of the chloroform

* It was stated by Dr. J. P. Kay, in 1834 (*Treatise on Asphyxia*), that limbs which had lost their muscular irritability might reacquire it by the injection of arterial or venous blood.

upon muscular substance and the fleshy pericarp of seeds and fruits is the production of an immediate contraction of the fibre or parenchyma, expelling the aqueous juices to the bottom of the vessel in which the experiment is conducted. M. Augend suggests, among various other applications, that this substance might be found of advantage when it was desired to preserve a corpse for a certain period for the purposes of legal medicine.

M. Robin has conducted numerous series of experiments upon the volatile compounds of carbon and hydrogen, which possess the power of preserving animal substances in spite of the presence of oxygen, as sulphuric ether, chloroform, naphtha, oil of pit-coal, &c. &c. These bodies and their vapours enjoy complete antiseptic power, the blood in fleshy substance being maintained in quite a fresh state. Water impregnated with the vapour of these hydrocarbonates possesses similar power.

Conducted by analogy of chemical composition, he has discovered another order of substances, possessed of a high degree of antiseptic power, viz., the binary compounds of carbon and some other metalloids than hydrogen. He has proved experimentally, that sulphuret of carbon, protochloruret of carbon, azoture of carbon, the Dutch fluid, and hydrocyanic acid, are, like the carburets of hydrogen, powerful preservatives of organic matters. The vapour of these substances, disengaged at the ordinary temperature in closed vessels, preserves such for an indefinite period. For the preservation of the colour of bodies, chloroform, protochloruret of carbon, and oil of pit-coal, are very superior in efficacy to bodies hitherto employed; but they are far from equaling hydrocyanic acid in this respect, the vapour of which absolutely prevents all physical alterations whatever. Nevertheless, in reference to the price of its production, the power and rapidity of its preservative action, no substance presents such great advantages as oil of pit-coal, the rectified allowing much less change of colour than the impure. M. Robin believes it may be advantageously employed for embalming, in the preservation of bodies for dissection or of anatomical preparations, in the tanning of leathers, for the destruction of insects that attack collections of natural history, trees, or seeds, and for the conservation of cereals and seeds in general.—*B. and F. Med. and Chirurg. Rev.*, July 1851, from *Gazette Médicale de Paris*, 1850, Nos. 46 and 48.

4. *On Local Anæsthetics.*—M. ARAN has for some time been actively engaged in following up the experiments of the English and French observers upon local anæsthetics, and the following are the conclusions of his last paper read at the *Académie des Sciences*.

1. Local anæsthetic properties are found in all agents which have been recognized as possessing general anæsthetic ones, and in others of analogous composition, belonging chiefly to the series of chloro-hydrocarbons. 2. These local properties are not in direct proportion to the general ones, but rather to the fixity of the substance. The more volatile the body, the less is its local anæsthetic power, which explains the inferior degree in which sulphuric ether possesses this property as compared with other anæsthetics. 3. A great number of anæsthetics produce irritation of the skin, and chloroform is remarkable in this respect. 4. The agent which is the most convenient to manipulate, the most certain in its action, and the least irritating to the skin, is the chlorined hydrochloric ether (*ether hydrochlorique chloré*) recently introduced by M. Mialhe as an advantageous substitute for the "Dutch Liquid," under which name two fluids of very different power are on sale. The *sesquichloride of carbon* may also be so employed; but while the complete effect of the former is obtained at the end of some minutes, the *sesquichloride* requires at least two hours. 5. In order to obtain satisfactory anæsthetic effects, small quantities of these two substances suffice. From 15 to 30 drops of the ether may be applied directly to the part, or upon moist linen, covering it over to prevent evaporation. Or an ointment may be composed of 4 parts to 20 of lard, or of 4 parts of the *sesquichloride* to 33 of lard. 6. Anæsthetic agents, and especially the chlorined ether, produce, after an interval of from two and a half to ten minutes, a complete cessation of pain, and after a time, varying from five to fifteen minutes, a cutaneous insensibility that may be easily estimated by means of a needle.

7. The insensibility is not limited to the point at which the application has been made, but extends to the deep-seated parts themselves; and in this way by applying it to the skin we relieve the pain of muscular organs, nerves, articular cavities, and the viscera contained within the thorax and abdomen. Moreover, the anæsthetic effect extends for a variable distance around the point of application, rarely less than to two square inches. 8. The duration of the insensibility varies according to the nature of the agent employed, the quantity applied, and the duration of the contact. It lasts only from one-half to an hour, when the anæsthesia is produced in the physiological condition of parts; but it continues much longer when the application has been made in order to produce insensibility to pain—*analgesia*. 9. In a medical point of view, the number of cases in which local anæsthetic applications may be employed is truly immense. The following proposition is the result of a very multiplied experience: *Whenever there exists an acute pain in any part of the economy, whether such pain itself constitutes the entire malady, or only forms an integrant and principal part of it, we may, without any inconvenience resulting, relieve the patient of it for a period more or less long, by one or several local anæsthetic applications.* The employment of these agents in *rheumatic muscular pains*, and in *neuralgic pains*, has become too common to need additional illustration; but it may be observed that the latter do not become cured unless they are very recent. M. Aran is, however, especially desirous of calling attention to their great utility in *articular diseases*. In *subacute and chronic articular rheumatism*, they remove pain in a few minutes. They give great relief too in *subacute and chronic arthritis*; but here they are especially useful in favouring the application of certain surgical procedures, as *e. g.* compression, extension of contracted joints, &c. It is, however, in *acute articular rheumatism* that he has derived really surprising benefit from these means. The case obtained restores to the patient temporarily the use of his limbs and his sleep; and the duration of the disease becomes much abridged. This medication may be combined with resection or any other mode of internal treatment. By the same means he has treated *lead colic*, *nervous, uterine, and nephritic colics*, and even the pain attendant upon *puerperal peritonitis, pleurisy, and pericarditis*; and in all, when complete and definitive cessation of pain has not resulted, at least a degree of amelioration and relief that could scarcely have been hoped for has been obtained.—*Brit. and For. Med.-Chirurg. Rev.*, July 1851, from *L'Union Médicale*, 1850, No. 154.

5. *On the best Mode of preparing the Juice of Dandelion, so that it shall continue in perfect preservation throughout the year.*—The following mode of preparing the juice of dandelion, advised by Mr. DONOVAN (*Dublin Medical Press*, June 11th, 1851), is worthy the attention of pharmacutists:—

“The dandelion abounds in a milky juice; it has no smell: its taste when recent is very bitter, the roots more so than the leaves. By drying, the bitterness is destroyed, as happens to many other vegetable substances. I have observed that the juice of the recent roots and herb loses its bitterness by long boiling, and that it even assumes a saline sweetish taste, such as is observable when it is extracted from plants dug during the cold months of the year. The change happens more easily in the juice of the leaves than in that of the roots; yet a decoction of the roots long boiled retains but little of its bitterness. The recent juice of the roots, if evaporated to dryness and restored to its original bulk by the addition of water, will be found by far less bitter than before. The solid extract is therefore a bad preparation, and, as Lewis observes, becomes still worse by being kept. Indeed, the extract of commerce has but little bitterness, and is often so sweet as to suggest a suspicion that it contains a foreign admixture: I have sometimes thought that it was the sweetness of Spanish liquorice. Its colour, which ought to be brown, is generally black.

“The bitterness is due to the presence of a proximate principle said to be crystallizable. When this has been impaired or removed by boiling, a sweetish, saline, and even acidulous taste is discoverable: it naturally belongs to the juice; for, besides the bitter principle, it is known to contain phosphates, sulphates, muriates, and tartaric acid, or a bitartrate, which are the useful ingre-

dients; along with uncrystallizable sugar, gum, inulin, caoutchouc, and some other matters of no medical importance. The bitter principle and salts are the constituent ingredients which claim the attention of the practitioner; and it is to their preservation, by whatever process the juice is prepared, that the apothecary should devote his attention; for, as Dr. A. T. Thomson truly observes, 'much depends on the nature of the preparation.'

"Keeping the foregoing observations in view, the best mode of conservation is obvious. The whole herb as soon as dug is to be washed immediately, well pounded, and the juice extracted by means of the press. Delay in pounding the roots will soon begin to impair their bitterness; and even the expressed juice will speedily begin to change unless put in process of preservation very soon after expression. When the juice has been pressed out, the marc, still containing valuable matter, is to be well mixed with as much water at 200 deg. as will bring the whole to about the consistence of a pulp. After standing two hours, the liquor is to be pressed out, added to the former product, and the mixture is to be very slowly evaporated in a wide earthen vessel, with constant agitation, until it be reduced to one-half. We now have the salts (which in a medical point of view are of great importance) and other ingredients in a much more concentrated form than in the original juice: but the bitter principle has been somewhat impaired in efficacy during the evaporation. Even if this deterioration had not taken place, the juice does not in its natural state contain a sufficient ratio of the bitter principle to act with adequate effect as a tonic when so moderate a bulk of the liquid is administered as is convenient or suitable. On this account a quantity of the roots without leaves, equal to the weight of the whole herb previously employed, must be pounded and expressed. This bitter juice, which is very small in quantity, not in some seasons more than a gallon from 112 pounds, is to be laid aside until the residual marc, from which it has been pressed, has undergone a new process, which is as follows: The mixture of juice obtained from the whole herb and the evaporated infusion of its marc is again to be brought to a boil, and at that temperature is to be infused on the marc of the roots; the temperature will thus be reduced below the injurious degree, but will be still sufficient for extraction of the bitter. When cold, the liquor is to be strongly pressed out, and mixed with one-sixth of its total measure of spirit of wine. The mixture is to be poured into common quart bottles, but they are not to be entirely filled. Appert's process, somewhat modified, must now be resorted to. A large shallow vessel containing cold water is to be placed on a fire: the nearly filled bottles are to be immersed in the water as high as the liquor within: the water is to be slowly brought to about 180 deg.: the bottles are to be withdrawn, and the reserved juice obtained from the roots is to be added to each in equal quantities. These quantities ought to fill the bottles so high in the neck that when the corks are driven in there will be the smallest possible intervening space. The corks being cut off close to the glass, the mouths are to be sealed with hard bottle wax: and the bottles set by, inverted, in a cool place.

"The bitter principle, obtained in the second part of the process, having been scarcely exposed to heat, is as perfect as it existed in the roots. Heat is highly injurious to the active principle of various vegetable substances. The root of *arum maculatum* is poisonous and so acrid that it will blister the skin; but by boiling or even drying it becomes harmless, and in that state is by some nations used as food. *Mezereon* bark in its recent state also blisters the skin, but by the moderate heat of drying it loses this power. The seeds of *palma Christi* are acrimonious and violently cathartic; yet when boiled they are used as an article of diet. The root of the cassava plant, which, like dandelion, yields a milky juice, is in its natural state a violent poison, but when boiled it becomes harmless: the leaves, equally poisonous, are by heat rendered innocuous, and are eaten as a culinary vegetable: tapioca, the food of the invalid, is obtained from the roots. The effect of heat on onions and garlic is known to every one.

"The quantity of spirit of wine here made use of, although it conduces to the preservation of the juice, is by itself insufficient: hence the necessity of Appert's process. Each ounce will contain about one drachm of spirit of wine; more might be disagreeable or inexpedient.

"By the foregoing process, we have dandelion juice in a degree of perfection not very inferior in qualities to that which exists in the plant in its natural state; and in a condition to retain its virtues throughout the year."

6. *On the Galvanic Cataplasms of Prof. Recamier.*—Dr. TILT read to the Medical Society of London, May 31, 1851, a communication on this subject.—After some preliminary observations, Dr. Tilt stated that he wished to draw the attention of the Society to the particular mode of employing electricity, in which continued currents are generated by the contact of metals, by which means a large quantity of electricity is obtained at a low tension.

There are many machines constructed on that principle; but they are all ponderous complicated machines, liable to get out of order, and therefore requiring the guidance of some one who well understands their action. The feelings of awe, too, with which the patient generally beholds them, interfere frequently with the effects we desire to obtain. Would not, then, a milder application of the same agency, by permitting its prolonged employment, enable us to do more good than could be effected by the previously employed energetic modes of application? This simple question must have suggested itself to many, and it has suggested itself to a fellow of this Society, who has given great attention to the therapeutical influence of electricity. "I was very sanguine (says Dr. Golding Bird) that the current excited by a simple pair of zinc and silver plates, similar to those we employ to excite the contractions in a frog, would be found of great value in practice." But, to obtain an action, Dr. G. Bird thought it necessary to remove the cuticle from the skin; and then he found that the most oxidizable of the two metals produced sloughing of the skin, or, in other words, the electrical moxa of which he had shown the utility.

Previously to this, Mr. Spencer Wells has ascertained that the removal of the cuticle is not necessary; and that, by applying to the skin, previously moistened by diluted vinegar, two plates, one of silver and the other of zinc, connected by a silver wire, a marked electrical action was obtained; disordered functions of a particular nerve were restored to their normal state, and ulcerated surfaces were rapidly healed.

For many years Professor Recamier had made use of electricity by means of the energetic apparatus usually employed; and it may perhaps be remembered that, a few months ago, he presented to the French Academy of Medicine some remarks on a new mode of supplying electricity, by what he called galvanic cataplasms, consisting of filings of copper and zinc enveloped in cotton wool. Lately he had improved on this rather clumsy contrivance, and he had sent Dr. Tilt the little apparatus which he had now the honour of submitting to the inspection of the Fellows. Each of these cataplasms, or disks, if a scientific term was preferred, is a galvanic pile composed of twelve couples. The couple is formed by a ribbon of zinc and copper, and each couple is separated by a piece of flannel. On the coloured side is cotton wool; on the other, a piece of gutta percha tissue to insulate the apparatus. The only difference between the two disks is, that, in the pink one, the copper stands first, while the zinc comes first in the one covered with blue. The electrical force generated in the apparatus is sent through the copper rings, to which the insulated copper wire can be attached, when the more energetic effect of the two cataplasms is required. In some people, the acid perspiration of the skin is sufficient to increase the intensity of the electric action; but more active effects are produced by wetting the flannels with diluted vinegar, or a weak solution of common salt, as is seen by the action of the apparatus on the electrometer. When one of these cataplasms is tightly bound to the surface on the skin, it gives an unusual sensation of warmth; a pricking sensation is felt, and the skin is made red, when two of the cataplasms are connected by the wire, and applied to the same surface, but at some distance from one another. A stronger effect is produced when one is applied to the organ we wish to influence, and another to the opposite portion of the spine. Such are the modes of application; and it may be worn day and night without inconvenience, though, in ordinary cases, it is only under application at night. In what cases this apparatus has been, or may be expected to be useful, is a question which now

naturally suggests itself. In the hands of Professor Recamier, it once brought on menstruation before the usual time. He therefore intentionally applied it for that purpose, and with success in cases of chlorotic amenorrhœa. He is trying it in such cases of sterility as cannot be accounted for by any disease, but which seems to depend on a defective ovarian action; and, amongst other cases, on an illustrious lady, whose barrenness menaces to extinguish one of the oldest dynasties of Europe, and also in the case of a Russian princess. In this last case, menstruation, which formerly lasted but thirty-six hours, now continues for six days. This is the first effect; but time alone can show whether sterility will be removed in this or the other cases. Dr. Tilt thought it would help to cure some of those tedious cases of chlorosis, where a girl eats heartily, takes plenty of sleep and exercise, has nothing on her mind, and still derives but little benefit from good food and judicious treatment. In hopes that this mild electric action may take effect on the ganglionic nervous system, and give a spur to defective nutrition, he has lately applied one of the disks to the epigastric region of a patient, and the other to the spine. Besides these trials, Professor Recamier has applied these galvanic cataplasms, with marked and rapid success, in the treatment of rheumatic and nervous pains; in one obstinate case of constipation of some years' standing; in a case of asthma; and a patient suffering from angina pectoris was benefited, but not cured. Dr. Massé, and several other medical men in Paris, have found them successful in similar cases, as you will see by perusing the pamphlet Dr. Tilt presented to the Society. In this communication he has merely stated the results said to have been obtained by his venerable teacher; and, if this had not been the last meeting of the Society, he would have delayed drawing the attention of the Society to the subject until he had been able to test its utility by his own observations. He thought, however, the matter sufficiently deserving of consideration; and if, on account of the harmless appearance of the apparatus, the Fellows should be tempted to consider it ineffectual, he would beg to refer them to an authority already quoted, who says: "From what I have seen, I am fully convinced that a feeble current, if kept up for a long time in certain forms of paralysis (care being taken that the positive fluid traverses the limb in the direction of the nerves), would prove the most important mode of applying this remedy with success." It seemed to Dr. Tilt that Professor Recamier's cataplasms would be useful; and, as it was impossible for the Fellows to give them a trial without knowing where to get them, he concluded by informing them that the apparatus might be obtained of Mr. Joseau, of the Haymarket, or of Mr. Bucklee, of 86 New Bond Street, Oxford Street, at the cost of 15s.—*London Med. Gaz.*, June 1851.

MEDICAL PATHOLOGY AND THERAPEUTICS AND PRACTICAL MEDICINE.

7. *Lungs showing the Arrest of Phthisis in the Third Stage of the Disease.*—Dr. QUAIN presented to the Pathological Society of London, lungs showing the arrest of phthisis in the third stage of the disease.—A female, in May 1848, when thirteen years of age, was admitted an out-patient at the Brompton Hospital. She was very delicate, had lost flesh, and was suffering from severe cough, shortness of breathing, &c. Her illness had commenced with influenza in the early part of the preceding winter; she had also suffered from an abscess in the right arm. She had been recommended cod-liver oil, but was unable to keep it on her stomach. There was no predisposition to phthisis, and she had not then had hæmoptysis. Since that time, a younger sister has shown unequivocal evidence of phthisis, and an older sister has now become delicate. A note, taken shortly after her admission, states that "there is extensive consolidation at the apex of the left lung, and some deposition at the apex of the right," shown at the one side "by decided dullness, bronchial

breathing, and bronchophony; and, at the other side, by a feeble inspiratory, and a prolonged louder expiratory murmur."

A mixture, in which a drachm dose of cod-liver oil was diffused by means of liquor potassæ in mucilage, and a syrup composed of mucilage, syrup of squills, and a minute dose of morphia, was prescribed. The oil mixture was taken without disturbing the stomach, and she kept her ground. Examined in August, she is stated to have lost four pounds in weight, and crepitation is heard over the left apex; nothing additional at the right apex. Iodine counter-irritation was then applied. In the beginning of September she had profuse hæmoptysis, and subsequently a free puriform expectoration.

An examination, made in the course of this month, when she was able to attend the hospital, showed the existence of a large cavity, where the consolidation and softening had been previously observed. The dose of the oil was subsequently increased, first to a drachm and a half, and then to two drachms, with advantage; for, in the end of the following December, it is recorded that "she gains strength, and coughs but little." She did not attend during this winter, but received her medicine by her mother, and did well. In April 1849, she had an attack of influenza, from which she soon rallied.

In the following June, the record is that "she has not lost ground, though she has not gained in weight since her admission a year ago: there is loud pectoriloquy, cavernous breathing, and gurgling at the left apex, and loud expiratory murmur at the right."

At the end of July the report is, "she looks well; coughs only in the morning."

In August an examination showed "flattening of the chest over the apex of the left lung. The respiration there, though cavernous, is not loud. The pectoriloquy is very distinct. The respiration at the right apex is somewhat puerile." During the winter (1849-50) she continued the remedies.

In February, her appetite had failed, and a mixture of infusion of gentian and bicarbonate of soda was ordered once a day. From this she derived so much benefit that it was continued three times daily, and she was able to take the simple aniseed oil in half-ounce doses.

The following June it is noticed that she has had an attack of nettle-rash, but is still gaining strength, grows tall, and coughs but little, and only in the morning.

This improvement continued; and it is noted that last October she came to the hospital, having been for some time in the country, looking extremely well. Her weight, which at one time had been as low as four stone two pounds, is now four stone nine pounds. She had scarcely any cough; her appetite is good. She is free from suffering of any kind. Examination of the chest shows remarkable flattening and contraction over the apex of the left lung. There is very evident dullness in this situation, and the mobility here is as nine to thirty-two of the opposite side. The respiration is of a sharp whiffing character, with slight crepitus. At the opposite side the respiration is loudly puerile, and percussion shows the right lung extending across the sternum to the left side. At the summit of the left lung posteriorly the respiration is scarcely audible. The dullness here is more decided than in front. The heart is seen and felt to beat distinctly from between the second to the fourth left costal cartilages. The action of the heart in this situation had been a source of some annoyance to her. From this time (October) to the commencement of last March, this improvement continued. Her cough had nearly if not altogether disappeared. She continued the gentian with soda, the cod-liver oil, and the counter-irritant occasionally. At the beginning of March, during the prevalence of the influenza, she was attacked by the gastric, and not the pulmonary, complication of the disease. It commenced with bilious vomiting, followed by diarrhoea, great prostration, and rapid collapse, from which she died on the fourth day.

The body was well proportioned, and showing a very fair amount of fat in the subcutaneous tissue. The right lung was seen to be very voluminous, and extending across nearly as far as the left margin of the sternum. There was no appearance of the left lung in front, but its place was occupied by the heart and pericardium drawn upwards and to the left side, and the walls of the apex

of the chest falling inwards and downwards. The heart was healthy, and rather large for the size of the body. The left lung was found much diminished in size behind it. The lung was adherent more especially at the apex, which was covered posteriorly by a mass of solid fibrinous tissue, corresponding to the seat of dullness and feeble respiration previously mentioned. Very nearly the whole of what had been the upper lobe of this lung was occupied by the remains of a cavity irregularly divided into two, by one of the bands so frequently seen in phthisical cavities. The entire cavity was about the size of a large walnut. It contained about half a drachm of a thin whey-like fluid, with which were mixed particles of whitish coagula. The walls were formed by condensed pulmonary tissue, varying in thickness from less than a line to a quarter of an inch, and in some points puckered and contracted. The air-cells and small bronchi were distinctly visible, under the microscope, in this tissue, which was separated from the contents of the cavity by a wall or membrane composed of firm filamentous tissue and granular cells. This membrane had much the appearance of a mucous membrane, but it was not examined sufficiently soon after death to be able to trace the presence of an epithelium. The cavity communicated with the left bronchus by an orifice which would admit a crow-quill, situated midway between the top and bottom of the cavity. There was a good deal of healthy respiratory tissue in the lower lobe of this lung; but there were scattered through its substance six or seven points of condensation, such as are hereafter described existing in the right lung. The right lung was large, and the air-cells partook of its character. In water it displaced a quantity which measured twenty-three ounces, whilst the left displaced but nine ounces. The apex was remarkably puckered; and on cutting through this puckering the tissue of the lung was found to be traversed by short fibrous bands, between which appeared points of softish pale-yellow tubercle. A little lower down in the centre of the upper lobe a mass of soft tubercle, about the size of a small hazelnut, was found. It was enclosed in a cyst, and consisted almost entirely of fatty granules and cells containing similar particles. In the other lobes, several consolidated points were found—the largest smaller than last described, and none so fully formed. They appeared in some places to consist merely of condensed tissue; in two there was an appearance of yellow, firm tubercle; and in two, small calcareous particles. In neither lung was there the least appearance of recent tuberculous deposit. The other organs were healthy; the kidneys were large. There was no disease of the intestine beyond congestion, which in some parts was very distinct.

This case affords an additional illustration of the great extent to which the ravages of pulmonary phthisis may proceed, and its progress yet be stayed. Such cases were, happily, now met with more often since cod-liver had come into use: still Dr. Quain did not know of any case which afforded, by the evidence of post-mortem examination, so striking a result. This case was also interesting from its throwing light on the nature of the puckerings so constantly seen. Some observers were disposed to regard them as being independent of tuberculous deposit. In this case it was evident that they were due to the previous existence of this deposit, which, in fact, had been recognized there during life, and traced after death.—*London Med. Gazette*, June 1851.

8. *A Statistical Report upon Disease of the Heart, derived from a consideration of all the Cases admitted into St. George's Hospital during the last two years and a half.* By Dr. BARCLAY. ("Proceedings" of the Royal Med. Chirurg. Society, June 24, 1851).—Rheumatism is first considered as one of its causes. Divided into two nearly equal classes—those really inflammatory or acute, and those less so, or sub-acute—the former class is found to contain sixty-seven cases with cardiac lesion, sixty-four without, and twenty-one doubtful. Endocardial murmur is found not to be certain evidence of disease, even in the most acute cases. Females are slightly more liable to acute rheumatism than males, but less liable to a recurrence of the disease. Females are more decidedly liable in a larger proportion to cardiac complication, and this is especially proved by the existence of friction-sound in the proportion of three females to two males. Cardiac complication exists eighteen or twenty per cent.

more frequently in subsequent attacks than in primary ones. It is in the proportion of three to two of all the cases up to the age of twenty-five, and falls very rapidly after that age. The cases of sub-acute and chronic rheumatism furnish no examples of recent inflammation of the heart, but a considerable number of cases of old disease. So far as could be ascertained, these were almost all traceable to previous acute attacks, and were only about one-third of the cases which had previously suffered from acute rheumatism. The post-mortem appearances of recent inflammation are found associated with acute rheumatism, with disease of the kidney, with inflammation of the peritoneum and pleura, and with old disease of the heart, especially when hypertrophy existed, and with turbulent action during life. The cases of old disease of the heart are divided into sixty-one rheumatic, seventy non-rheumatic, and sixty-nine doubtful. They show a very considerable preponderance of males, especially among fatal cases. Up to the age of twenty, almost the whole, and even as far as thirty, more than half the cases are associated with acute rheumatism. In the next twenty years, the non-rheumatic almost double the rheumatic cases, and after fifty, there are scarcely any derivable from rheumatism at all. The duration of rheumatic cases, dating from the first attack of acute rheumatism to death, is generally much longer for females than for males, varying in the latter from four to six years; in the former, from twelve to sixteen years. Four out of seven fatal cases of acute rheumatism, and twelve out of eighteen of older standing, are associated with pericarditis, which is always severe and extensive; but universal adhesion is neither the constant nor even the common result of rheumatic pericarditis, and it exists in cases where the previous existence of rheumatism is altogether denied. In valvular disease, there are eighteen rheumatic cases, twenty-three non-rheumatic, and twelve doubtful. The recent cases are all examples of inflammation of the mitral valve. When old and recent disease exist together, and when old disease is seen in different stages, the mitral valve generally appears to have been first attacked, and the aortic secondarily; and hence the preponderance of double valvular lesion in rheumatic cases seems to be due to renewed inflammations at distinct periods. Inflammatory thickening occurs also in several cases in which there had been no rheumatism. Disease of the kidney is associated with two cases of simple recent fibrinous deposit on the valves, and three of recent pericarditis, in which no other cause was known to have been in operation. It seems questionable how far this can be taken as a cause of great thickening of the valves, or of an adherent pericardium. Disease of each set of valves seems to produce, in nearly equal proportions, hypertrophy and dilatation, but aortic regurgitation especially the latter; atheroma of the aorta, more commonly hypertrophy; adhesion of the pericardium, chiefly dilatation. Disease of the kidney is associated with an immense majority of the cases of hypertrophy, and similarly of all the cases of disease of the kidney; more than a third presented on post-mortem examination more or less of hypertrophy of the heart. A table is appended, in which the post-mortem appearances are arranged, of all the cases in which clinical history threw any light on the disease of the heart found after death.—*Lancet*, July 12, 1851.

9. On *Anasarca in Disease of the Heart*. By M. СНОМЪЛ.—The progress of infiltration is ordinarily slow and progressive in affections of the heart; but, nevertheless, nothing is more common than to meet with individuals among the working-classes, who, while presenting the appearance of health, and without having manifested any sign of disease, are seized with anasarca, the physical and material signs of cardiac alteration not being present, or only, at all events, to a very slight degree. This is because there are causes prevailing in this class of society—such as excess of labour, fatigue, watchings, misery, drinking—which, in a measure, precipitate the course of the disease. These causes come in addition to the natural influence of the disease; and the anasarca appears at a period when without these it would not have manifested itself. So, when these causes are removed, and the patient is kept at rest, and sheltered from the unfortunate conditions that have given rise to so serious a complication, the oedema diminishes daily, and the patient soon leaves the hospital be-

lieving himself cured. New exposure to excesses, fatigue, or misery, reproduce the anasarca, which may be again dispersed, and that for several times; but after a certain number of such attacks, it in the end becomes permanent.

Frequently the appearance of an acute anasarca throws a ray of light on obscure and embarrassing cases, indicating in the great majority of cases an acute disease of the heart. Doubtful endocarditis and pericarditis are often thus revealed to the observer by general œdema. M. Chomel thus considers that in the case of anasarca coming on, when we can discover neither change in the blood nor albumen in the urine, we are authorized in admitting the existence of disease of the heart, or large vessels, even when all material signs of this affection are completely absent.—*British and Foreign Medico-Chirurgical Review*, July 1851, from *L'Union Médicale*, 1851, No. 26.

10. *Cases in which there was unusual Difficulty in the Diagnosis of Pleuritic Effusions.* By T. A. BARKER, M. D. ("Proceedings" of Royal Med. Chirurg. Society, May 27, 1851.)—The first case related by the author was one in which there was extensive emphysema of the left lung, which had encroached greatly on the right side of the chest, pushing the heart and mediastinum beyond the mesial line. The right lung, which was closely adherent to the costal pleura, was reduced to about a fourth of its usual size, was exsanguine, and contained no air, resembling a lung compressed by effusion in the pleura. In consequence of these changes, no respiration could be heard in the right lung during life: the right side of the chest was universally dull on percussion, and the patient could only lie on the right side or sit erect. Along with these symptoms were others closely resembling those which usually attend hydrothorax; and the dyspnoea and symptoms of approaching apnoea being very urgent, the author thought himself justified in having a very fine trocar introduced into the chest, in order to ascertain positively whether there was fluid. No inconvenience resulted from the operation, and the symptoms were soon afterwards explained by the discovery, on post-mortem examination, of the very unusual state of parts above described.

The next case was one in which, without any of the general symptoms of pleuritic effusion, it was discovered, by auscultation, &c., that there was no respiration going on in the posterior third of the left lung. In four days the person died. The lungs were healthy; but there was extensive effusion, confined to the back part of the chest by a very narrow line of adhesion, extending from the upper and back part of the chest to the diaphragm, half way between the ribs and the sternum. The author referred to three other cases which he had seen, in which the pleuritic effusion had been limited by adhesions in the same position and precisely similar; only one of these had been seen by him during life, and in that the symptoms closely resembled those in the case last related. Two other cases were shortly alluded to, in which there was emphysema to a considerable extent; but respiratory sounds could be heard in every part of the affected sides, in consequence of the lung being kept partially in contact with the ribs by mucous adhesions, forming several separate cavities in which the purulent matter was contained.—*Lond. Med. Gaz.*, June 1851.

11. *Treatment of Erysipelas by the Muriated Tincture of Iron.*—Dr. G. HAMILTON BELL, in a paper read before the Medico-Chirurgical Society of Edinburgh (April 10th, 1851), and published in the *Monthly Journal of Med. Sci.* for June last, extols the efficacy of the muriated tincture of iron, in the treatment of erysipelas, a mode of treatment which he has resorted to, he says, in every case of the disease he has attended for upwards of a quarter of a century, without having in a single instance failed of success.

The first object is, he says, to have the bowels freely acted on, and then he administers the tincture in the following mode: "If the erysipelas be mild, fifteen drops of the muriated tincture of iron are administered in water every two hours until the disease is completely removed. When the attack threatens to be more severe, the dose of the tincture is increased to twenty-five drops every two hours, and persevered in night and day, however high the fever and delirium. The

only local applications I ever find necessary, are hair powder and cotton wadding. While I depend for the removal of the disease on the chalybeate, it is necessary that the bowels should be attended to throughout the treatment."

Several cases illustrative of the value of this mode of treatment are related.

Dr. C. BELL also addresses his testimony in favour of this treatment, and states that he has "prescribed it (the muriated tincture of iron) both in the idiopathic form of the disease, and in that consequent on external injury, with the most satisfactory results; and I have found it equally efficacious at every period of life, from early infancy to advanced age. It not only removes erysipelas in a remarkably short time without weakening the patient, but it effects such an improvement in the system, that those who are subject to periodical attacks of the disease are rendered much less liable to have a return.

"The beneficial effects of this medicine are so immediate and invariable in the common forms of erysipelas, that I feel convinced, were it given with boldness and perseverance in puerperal fever, which is now generally admitted to be analogous in its nature, and frequently accompanied by erysipelatous inflammation on the surface of the body, many valuable lives might be preserved.

"In pursuing the chalybeate treatment of erysipelas, I consider it of much importance to bring the system rapidly under its influence, in order to effect a speedy removal of the disease. I have therefore been in the habit recently of giving much larger doses of the tincture than I ventured to prescribe at first. It is a remarkable circumstance in the exhibition of this valuable remedy in the erysipelatous diathesis, that although given in much larger and more frequently-repeated doses than have been recommended in our dispensaries, it never produces headache, and when this symptom is present it quickly relieves it; at the same time, it reduces and regulates the pulse: thus showing that in this state of the system, it has a soothing and sedative, as well as alterative effect."

He particularly calls attention to the advantage of this mode of treatment in infantile erysipelas, and also in that form dependent upon external injury.

12. *Cod-Liver Oil in Gaol Cachexia.* By CALEB ROSE, Esq.—From the extensive trial which has been given to cod-liver oil, the profession is now able to form an opinion of the value of this medicine in certain diseases; and the author believes he is right in stating that those who have had large experience in the use of the oil esteem it a medicine of great utility. The diseases in which cod-liver oil has been found most beneficial are those which are termed scrofulous; and the author has found it so useful in a particular form of scrofula, that he has thought it might not be uninteresting to record the result of his experience in this form of disease. The form of scrofula to which he alludes is that to which prisoners are liable who have been for some considerable time confined in prison. Dr. Baly, in a very interesting article in the "Medico-Chirurgical Transactions," has shown that amongst prisoners who undergo a long term of imprisonment there is a high rate of mortality from tubercular diseases. In the last seven years the author has seen several cases of this scrofulous cachexia amongst the prisoners confined in the prison at Swaffham; and it appears to him to be different from the ordinary forms of scrofula met with in general practice. The men who have been the subjects of it, have not been robust at the time of their entrance into the prison, but they were not at this time apparently suffering from scrofula or any other disease. They had all been in prison six months before symptoms of scrofula appeared; most of them eight months; and their term of imprisonment was twelve months, and in one case, the author believes, two years. The symptoms of the disease are these: The man is observed to look paler and thinner than usual; he is very much depressed in spirits; has no appetite for his food; sleeps badly at night, and at that time, also, frequently has profuse perspirations; there is slight diarrhoea; the pulse is quick, irritable, and feeble. With those symptoms, the author has in every case found some of the cervical glands more or less enlarged, and, moreover, they continue to enlarge very rapidly. In the first five years, three of the men died in prison, two of very rapid phthisis (one of them of sudden and large hæmoptysis), the third of tubercular peri-

tonitis. The others who were seriously affected with this scrofula were discharged from prison before their proper time, and, I have since learned, recovered speedily after their liberation. Those who suffered in a minor degree were carried on to the end of their term of imprisonment by care and indulgence. Rather more than two years since we began to treat these cases with cod-liver oil, and with the best effects. As soon as a prisoner begins to show that marked deterioration of general health which is so likely to end in the development of scrofula, he is put upon the oil; and in every case the author has seen the man gain colour and flesh, and become restored to health. The two men who first took the oil had the cervical glands much enlarged (in one of them suppurating), and as they had still to remain some months longer in prison, it was thought that they must have been discharged before the end of their term; however, after taking the oil a month they improved steadily, and eventually left the prison at their proper time, in as good health as when they entered it. Since these two cases there have not been any so bad, as the oil has been administered in good time to those men who have shown that deterioration of health which appears to be the commencement of scrofula; and certainly their health has apparently been entirely restored by this valuable medicine.—*Ranking's Abstract*, vol. xiii., from *Prov. Med. and Surg. Journ.* Nov. 27, 1850.

[Dr. GIVEN has also extensively employed the cod-liver oil in the Eastern State (Pennsylvania) Penitentiary, for gaol cachexia, and, he informs us, with great advantage. We hope to be able to present the results of his experience in the next number of this Journal.]

13. *Koussou*.—Dr. CRISP mentioned, at the recent anniversary meeting of the Prov. Med. and Surg. Association, four cases of *tænia solium*, in which he had used the koussou. Two were cured, and the other two were failures. He questioned whether it were worth more than turpentine, except that it was milder in its action.—*Med. Times*, Aug. 16.

14. *Case of Epilepsy treated by Tracheotomy*. By W. H. CANE, Esq. ("Proceedings" of Royal Med. Chirurg. Soc., June 24).—Dr. Marshall Hall had suggested on several occasions, and especially in a conversation with Mr. Cane, that as the attack of epileptic or other *convulsion* implied closure of the larynx, with expiratory efforts, the attack of convulsive epilepsy would be prevented by tracheotomy. Mr. Cane was summoned, on Feb. 1, 1851, to the case of a boatman, aged twenty-four, who had become subject to violent fits of epilepsy, one of which had just occurred in so extreme a form as to leave him in a state of deep apoplectic coma and asphyxia, inspiration being performed only "by seldom and short catches, whilst the veins of the head and neck were everywhere visible and greatly distended." This state had continued nineteen hours. "Feeling convinced," Mr. Cane observes, "that the patient must shortly expire, and that the root of the evil was in the closure of the larynx, I at once proceeded to open the trachea, a matter of no small difficulty, on account of the twisted state of the neck, the engorged state of the vessels, and the constant action of the muscles. The operation of tracheotomy was performed, and the tracheal tube is kept in the trachea to the present time. The relief to the patient was immediate; the air passed into the lungs, the state of spasm subsided, with the turgid condition of the head and neck, and the patient soon recovered his sensibility. This was not the only gratifying result; although the poor man had experienced his epileptic seizures in increasing violence during seven or eight years, and recently thrice a week, he had, on April 1st, during two months, had no return of them. More recent accounts of the patient, who is now in Staffordshire, confirm the former report; the tube is still kept in the trachea, and the epileptic seizures have not recurred.—*Lancet*, July 12, 1851.

15. *On the Causes, Consequences, and Treatment of Inflammation of the Veins*.—HENRY LEE, Esq., in an interesting paper in the *London Journal of Medicine* (March and July 1850), endeavours to establish the following points in reference to the pathology and treatment of inflammation of the veins:—

1st. That inflammation, both of the veins and of the capillary vessels, usually depends upon irritation, communicated to them through their contents.

2dly. That pus is capable of producing such irritation when detained in contact with the lining membrane of the veins; but that it may be conveyed along their channels, without leaving any trace of its passage.

3dly. That pus, under ordinary circumstances, cannot circulate in living vessels, in consequence of its power of determining the coagulation of the first portions of the blood with which it is brought in contact.

4thly. That when pus is carried along a vein, it is in consequence either of the disturbance of the coagulum which has first detained it, or of the blood having in some measure lost its natural power of coagulation.

5thly. That when, in consequence of either of these conditions, pus does find its way into the circulation, it may nevertheless determine the coagulation of the blood in its passage, either in a different part of the same vessel, or in distant parts of the system.

6thly. That when the coagulation occurs in a distant part of the body, it is usually observed in capillary vessels.

7thly. That when it occurs in a large vein, it may affect the circulation through the whole of the vessels which supply it; and that if, for example, a coagulum be formed in, or extend to, the common iliac vein, the obstruction produced may give rise to all the symptoms of *phlegmasia dolens*.

8thly. That, under any of the circumstances above mentioned, bleeding and the use of mercurial medicines are of at least doubtful efficacy.

16. *Effects of Molluscous Tumours when developed in the External Auditory Meatus.*—Mr. TOWNSE exhibited to the Pathological Society of London (May 20, 1851) some specimens illustrative of this.—Although the existence of molluscum contagiosum in the external meatus has not been recognized by any former writers on diseases of the ear, it is far from being a rare disease, especially in elderly persons. It is found in all parts of the tube, but the situation where it is most common is the superior and posterior part, near to the attachment of the membrana tympani. The preparations laid before the Society show the effects of these molluscous tumours—1st, on the meatus; 2dly, on the tympanic cavity.

1st. *The meatus.*—When situated at the posterior part of the meatus, these tumours, if their progress be unchecked, cause absorption of the layer of bone separating the meatus from the mastoid cells, and they frequently extend into the mastoid cells, of which they occupy a considerable space. When a tumour is placed in the floor of the meatus near to the membrana tympani, the bone between the tube and the jugular vein is sometimes absorbed, and the vein is separated from the meatus by only a delicate membrane.

2d. *The tympanic cavity.*—It has already been stated that the molluscous tumours are frequently developed at the superior and posterior part of the meatus, near to the membrana tympani. As they increase in size, they cause absorption of the superior part of the membrana tympani, and of the adjacent bone, thus producing a large opening into the tympanic cavity. Through this opening the tumour extends, and, increasing to the size of a small hazelnut, it not only occupies the greater part of the tympanum, but it sometimes extends upwards, destroys the layer of bone separating the tympanic cavity from that of the cerebrum, and comes into contact with the dura mater, which also partakes of the disease. In one case the tumour had caused disease in the lower wall of the tympanum, and the jugular vein was laid bare. The layer of bone between the carotid artery and tympanum was also carious.

When the tumours have increased to such a size as to cause irritation to the dermoid layer of the meatus, catarrhal inflammation ensues, attended by considerable pain; such cases have no doubt hitherto been comprehended under the general term otorrhœa.—*London Med. Gaz.*, June 1851.

17. *Case in which the Liver contained Air.*—M. PRIOR recently met with a very singular appearance in the body of a man, æt. 21, who died at La Charité

of very confluent variola, the colon, after death, presenting numerous ulcerations, which only affected the mucous membrane. The circumstance that attracted attention was the fact of the liver, on percussion, transmitting a sound, as if it contained air. Neither it nor any other part of the body had undergone putrefaction. On cutting into the liver, it was found to have lost its granular appearance. On pressure, it crepitated like lung, and swam in water; if squeezed, bubbles escaped from it, and it then sank. In other respects it appeared healthy. The *vena cava inferior* also contained air; but the *vena portæ* was not examined. There were no signs of emphysema, but some gas was observed near the pancreas and kidney. In consequence of the numerous intestinal ulcerations, which, from the hemorrhages that occurred during life, may be supposed to have opened some vessels, gases might possibly have penetrated into the ramuscles of the *vena portæ*, and thus arrived at the liver. However this may be, had the organ been percussed during life, it must have been mistaken for lung; and when cut into after death, a superficial examination might easily have led to the same error.—*British and Foreign Medico-Chirurgical Review*, July, from *Gaz. des Hôpitaux*, 1851, No. 24.

18. *On a New Epidemic Exanthem.*—Dr. LAYCOCK has published, in the *Medical Times* for March 8, 1851, a clinical lecture on an affection which he considers as a *new epidemic exanthem*. About a year and a half since, he first observed the disease among the patients and domestics of a large private asylum; and even the children of the matron suffered. The robust were affected as well as the feeble. Concurrently with the boils, there was sometimes an ecthymatous affection of the skin. The disease was not fatal in any case. Dr. Laycock believes it to be epidemic over a great part of England.

The disease is mainly characterized by a succession of boils on various parts of the body, of various sizes, from a bean to a walnut. First, there is a small hard pimple, with, perhaps, a vesicle or circlet of vesicles on the top. This itches; the top is scratched off; when it is found that there is a small tumour in or below the derma, which becomes larger, inflamed, very painful, and at last suppurates, with an erysipelatous blush about it, and in bad cases with phlyctenæ. A number of these occur in succession on various parts of the body, but principally on the forearm, leg, and nates. Occasionally there is a vesicle only, which quickly puts on the appearance of ecthyma; and in one case at the York Dispensary (in a child), there was just one large livid-looking phlyctena, as large as a crown piece, very like gangrene. Sometimes there is a solitary boil, large, angry-looking, and mischievous as a carbuncle. An aged lady, who came under his notice, had one of these on the mons veneris; and sometimes even the minor specimens are not to be distinguished from carbuncles. Very often, after they have sloughed and healed, they leave an indurated condition of the skin and subcutaneous cellular tissue.

The eruption, whatever form it may assume, has a definite period of duration, and continues from two to six weeks. The furuncular form is not always more chronic than the ecthymatous, but is so for the most part; the exceptions being those cases in which the patient is cachectic. It is not, however, dependent at all upon a cachectic condition, for it occurs in robust men and in very healthy children. Nevertheless, the cachectic suffer more from the disease, and perhaps they suffer also in greater numbers. In some instances we may clearly trace the localization of the boils to some local cause; for example, a crop will break out round a blister, or round another boil, if it be politiced much, or round a burn. In one case, they occurred on the neck, thorax, and upper arm of a young woman who had irritated her throat by the inunction of the iodide of potassium ointment; and in another, chronic psoriasis seemed to have been the exciting cause. Dr. Laycock suspects that any local irritation of the skin is sufficient to induce the disease in an individual within the sphere of the epidemic.

Dr. Laycock believes that this eruptive disease occurs under the following forms: 1. There may be a solitary boil, presenting, for instance, a phlyctenoid character, with inflammation of an erysipelatous character extending down the arm to the wrist, and upwards towards the shoulder. 2. A solitary phlyc-

tæna, or several. 3. Several boils, varying in size and character up to carbuncles, without any other cutaneous disease. 4. Boils, with ecthyma, eczema, or impetigo; but much more frequently with ecthyma. 5. The boils differ, in leaving or not leaving behind them an induration of the skin and subcutaneous tissue.

Dr. Laycock is of opinion that this epidemic is essentially a blood-disease, caused by some specific poison. What that poison may be, and what its origin, are altogether uncertain; it may be from the atmosphere, or from our food, as American flour, for example, or from the flesh of tainted cattle, or may be generated within the body by atmospheric peculiarities; or it may be a contagious *materies*, originating in the first instance with brutes, and then transmitted from one individual to another. If it be the latter, as seems most probable, then he thinks it is *strictly* contagious, like glanders or syphilis, and not infectious also.

During several months past, there has been an epizootic prevalent in Yorkshire, affecting horses and cattle. In the latter, the mouth and throat are so inflamed that the animal cannot eat, or the hoofs come off. The same disease is prevalent in Shropshire. It seems to correspond with the epizootic *Maulwech* and *Klauenseuche* of the Germans, and is accompanied with an aphthous eruption. According to Levitzky, persons attending on cattle attacked with this disease, or something similar, which he terms, "angina catarrhalis," were affected with an inflammatory *rheumatic fever* (not with an angina catarrhalis), accompanied with a pustular eruption, and abscesses and ulceration of the lower extremities.

In treating this furuncular disease, little more is required, in ordinary cases, than to let it run its course, which is completed in three or four weeks. An occasional purgative and warm bath will be useful in allaying inflammatory action, and perhaps diminishing the number of boils. Two grains of calomel with rhubarb, colocynth, or scammony, twice a week, will be useful: in the more severe cases, the mineral acids and vegetable bitters must be added, and a good diet; the liquor of the amorphous sulphate of quinine in full doses, with dilute nitric acid, has been found useful. In all cases, however, purgatives and the warm bath are beneficial. Cataplasms, fomentations, etc., are not of much service. So soon as suppuration is established, a free incision should be made into the boil, and then the water-dressing applied: care should be taken that the pus do not flow on the adjoining skin, and (as in erysipelas) that the sponges, etc., be not used by other patients or persons.

The editor of the *Lond. Journ. Med.* states that boils have been unusually prevalent this year in London and the neighbourhood, and in Philadelphia we have observed a very remarkable number of cases of this affection, as also of carbuncles and of whitlows.

19. *On Eclampsia Nutans*.—Dr. FABER relates two cases of this curious affection. The first occurred in a girl, æt. 3, who, though pale and weakly, had not suffered from any decided disease until three months before, when she complained of headache and sleepiness, began to squint somewhat, and sometimes to nod her head towards the left side. This nodding action was at first continued only for a few minutes three times a day, during which the head was making constant salutation-movements. After a while the attacks increased in frequency, and were fearfully violent. The child was much disposed to sleep; and became on waking convulsed in the extremities, this passing on to complete epilepsy. She was backward in mental development, and had an idiotic expression of countenance.

The second occurred in a boy, æt. 6, who showed good capabilities for instruction up to the commencement of his sixth year, when he fell into the water. He remained in bed several days after in a drowsy state, and was never again so lively and quick. After a while, he was observed to nod his head for two or three minutes, and this several times in the course of the day, the motions being sometimes so rapid that eighty could be counted in a minute. They commenced at first slowly, like real salutations, but gradually increased in quickness, when the child would fall back in a passion. During the time they con-

tinued, his face was distorted, and great fatigue was induced. He was aware when the attacks were coming on, and his consciousness continued during their prevalence. He was pale and feeble, and had acquired a peculiar, stupid look.

The reporter inquires whether this is a partial chorea or a peculiar form of spasm, and whether it is dependent upon morbid conditions of the brain or spinal marrow. The most careful examination of his two cases did not enable him to decide. No pain or tenderness about the head or spine was discoverable, and nothing abnormal in the general condition. Various applications and medicinal substances were resorted to, with but very little success—iron seeming the most useful among them.—*British and Foreign Medico-Chirurgical Review*, July 1851, from *Schmidt's Jahrb.*, vol. lxvii.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

20. *On the Application of Anæsthetic Remedies to Surgical Purposes.*—The *Dublin Medical Press* (March 12th, 1851) contains a very interesting paper on this subject, communicated to the Surgical Society of Ireland by Dr. FLEMING, which we conceive to be of so much practical importance, that we shall give a very full analysis of it.

In considering the selection of cases for anæsthetic agency, Dr. F. remarks, "The state of the system at large must be borne in mind, and also the special character and locality of the injury or disease which it may be the object of the surgeon to remedy. Those two circumstances should form most important elements in his decision, as upon the accuracy of that decision depends the successful or satisfactory application of the agent—nay more, perhaps the life of his patient. Due importance should be always attached to them—careful examination should be made as to the presence of any structural lesion of any vital organ—habits of previous life should be inquired into—peculiarities of constitution should be ascertained—and functional derangements, not fairly attributed to the peculiar nature of the case, should be carefully investigated. Every day's observation proves the importance of those particulars as regards the general condition of the patient; and it will be seen, in the sequel, how requisite it is equally to bear in mind the local features of the injury or disease present. Yet, it is a pleasing reflection that occasional deviations from such stringent rules may be made without injurious consequences, even in reference to the general signs of disease, as would appear from the following remarkable instances:—

"In September, 1848, a young man, aged about 20, reduced to the most extreme state of emaciation and exhaustion, and in the advanced stage of phthisis, accompanied with cavities in the upper part of each lung, entreated Mr. Cusack to amputate his thigh under the most distressing and uncontrollable sufferings. The knee-joint, for a lengthened period the seat of chronic strumous arthritis, now presented its cavity exposed from the sloughing of the whole of its anterior coverings, and one enormous sheet of ulcerating surface was to be seen, with the curious ends of the bones projecting through it. The torture of the poor fellow was frightful to witness. The slightest motion of the limb, the slightest touch of the surface, produced the most agonizing cries. His wish was ultimately acceded to: he was removed from his ward to the operation theatre under the anæsthetic influence, and under it a painless amputation was performed without any injurious results, either immediate or subsequent, the pulmonary symptoms not having been ostensibly, in the slightest degree, affected by it.

"Another case is worth noting, in which benefit was derived from its partial adoption, although a very important organ was implicated.

"In May, 1849, a young man, between twenty and thirty years of age, of athletic frame, and in apparent good health, betrayed maniacal symptoms of a

nature to demand personal restraint. It was indispensable to put on a strait-waistcoat, and any attempt on the part of the attendants to do so, no matter how devised, had failed, and always produced most violent paroxysms of rage, during which every mischief was threatened. It occurred to me that, under anæsthetic influence, the object might be accomplished. I induced him to lie down, and proceeded in the ordinary way to administer the agent. He became tranquil and comparatively composed and manageable, though he continued to speak equally wildly and incoherently. Watching an opportunity, I now desired the very same attendants to proceed to the ordinary mode of personal restraint. He submitted to the details without the slightest opposition or remark, and did not subsequently express any annoyance from it, the symptoms of his disease being apparently uninfluenced in other respects.

"A third case may be added, where, although the age of the individual was far advanced, and deranged cardiac action existed, yet complete anæsthesia was superinduced and kept up for a lengthened period with impunity.

"A man, having all the external characteristics of perfect health for his advanced period of life, verging on eighty years, applied to me with symptoms of calculus in the bladder. I sounded him, and finding a stone, procured his admission into Steevens' Hospital. It was finally decided that the case was one favourable for lithotomy, and the operation was performed by Mr. Colles. The question of anæsthesia became an important one, as well on account of his period of life as of the fact that there was much irregularity of the pulse. By the ordinary physical examination, no sign of any structural lesion of the heart could be detected, either after hurried exercise or when at rest. The man was a very placid creature, and willing to submit to any operation for his cure. During his stay in the hospital, he witnessed the effects of anæsthesia in varied patients who had undergone operations, and he stated to me that he was anxious to submit himself to the same influence. I made an experimental trial two days before that arranged for the operation, and found I could succeed without influencing materially the pulse. I did not press the agent, and allowed its effects to pass off rapidly. He felt no uncomfortable sensations from the experiment. He moved about, ate his meals, and slept, as usual. On the morning of the operation he was calm and placid as heretofore, and felt no apprehension of its effects or of its results. He dressed himself, walked up to the operation theatre, entered into conversation with those around him, and placed himself on the operation table without the slightest murmur. An operation, necessarily tedious from its complicated details, was undergone without a particle of suffering, and this aged man awoke, if I may so express myself, from his anæsthetic sleep, with a countenance as calm as if no operation had been performed, and with a pulse as firm as previous to it.

"I have selected these as extreme cases, illustrative of the opportunities we may avail ourselves of to alleviate human sufferings, even under the untoward circumstances I have specified; but it should never be forgotten that such are exceptional cases, and of a class requiring the most careful circumspection, and that, as a general rule, we should avoid those where the slightest deviation from the normal condition of any important organ presents itself. Assuming, however, that no such objection exists, many opportunities present themselves of witnessing the beneficial effects of this valuable assistant to the surgeon in the diagnosis and treatment, operative or otherwise, of injury and of disease.

"I could enumerate many instances illustrative of this. In dislocations, in amputations, primary and secondary, in the removal of tumours in varied situations, the removal of the breast, of the testicle, in operations on the urethra, in hernia, in necrosis, in lithotomy, in the extirpation of the eye, in numerous plastic operations, and others of a comparatively minor character, cases could be brought forward in which I adopted it, and an equally considerable number and variety could be reported from the communications I have received on the subject. However, it would be inexcusable to occupy the time of the Society with their details; and especially as many of those cases are familiar to members present, and no very remarkable peculiarities having presented themselves in the majority, I should prefer special allusion to those alone which may answer the practical objects in view, as we proceed.

"Independent of the cases above noted, I might mention others in which anæsthesia was had recourse to, but in which, as far as my experience at present goes, its adoption is, to say the least, injudicious, as well from the seat of the disease requiring surgical interference, as from the necessary position of the patient during the operation. In fistulæ in ano, and in hemorrhoids, where operative proceedings are called for, I am by no means satisfied with its results. I doubt if the best position for the patient in such cases is not leaning forward over a bed, table, or chair, and very often he is necessarily not a passive agent during the operation; if such be the fact, the objection to the use of anæsthetics is obvious.*

"In operations about the mouth, such as the removal of the upper or lower jaw, either partially or wholly, the propriety of anæsthesia appears to me to be more than questionable, for reasons similar to those already mentioned, quite independent of the risk of the attendant hemorrhage; and this same remark is applicable to any operation implicating the cavities of the mouth or nose. In some of those cases, particularly that of the removal of the lower jaw, I have imagined that the attendant pain has been mitigated materially by partial inhalation, both previous to and during the stages of the operation, but it requires great caution, and the nose is the organ through which the vapour of the agent must pass, it being absolutely idle to attempt it through the mouth. I might instance cases in ophthalmic and in obstetric surgery where equally important obstacles exist to the safe and successful induction of anæsthesia. These cases, however, have attracted the attention of far more competent authorities, and it is not requisite that I should do more than allude to them. I have used anæsthesia satisfactorily in a case of extirpation of the eye by Dr. Jacob at the Baggot-street Hospital, and in a similar operation, in private, by Mr. Wilde. In many other operations of his, such as painful plastic operations and operations on the face and lachrymal appendages, it has been of immeasurable value; but in those operations involving the interior of the orbit or the globe of the eye, such as strabismus and extraction of cataract, where a certain amount of assistance on the part of the patient is requisite during the several stages of the operation, I fully agree with my friend Mr. Wilde as to its inapplicability."

With regard to the *mode of administering the vapours of anæsthetic substances with the view to securing their salutary effects*, Dr. F. observes that "certain rules must guide the surgeon, which should be observed as rigidly as in the performance of his varied operations, in order that he may be prepared to meet any contingency. He should have a clear and distinct knowledge of the

* I have occasionally found that the seat of disease or injury is, when under anæsthetic influence, as if cognizant of what is contemplated, or, in other words, that its organic sensibility is not destroyed, and it is hence absolutely indispensable in some operations that the surgeon should be prepared for this, to avoid any rash movement on his part or on that of his patient. Thus, I have seen the rectum protruded, in cases of disease engaging it, when the patient was perfectly unconscious, and all tactile sensation blunted. In a similar state of the system, I have seen the upper and lower extremity, the seat of the operation, thrown into automatic movements, whilst the remaining portions of the muscular system were tranquil and motionless; and in sounding for the stone, and in the stages of the operation of lithotomy, I have seen a regular paroxysm of what is termed a fit of the stone when the patient was perfectly anæsthetic, as far as the conclusive signs of such state are concerned. I have witnessed, in a case of congenital phimosia, in a young officer, which he wished to be removed, the penis thrown into a state of turgescence when the operation was perfectly impracticable until it subsided, and this although consciousness and sensation were obliterated. I must here add that such conditions of the organ I never before witnessed; but I have repeatedly witnessed unsatisfactory anæsthetic effects where it was the subject of operation, and especially where the parties were inveterate smokers or drinkers. A curious coincidence once occurred in the case of a dog of the bull-dog tribe, who had an enormous growth of warty excrescences under the prepuce and around the glans, identical with those occasionally met with in the human subject. The dog was brought to our talented veterinary surgeon, Mr. Fergusson, for advice, who, whilst the dog was under anæsthesia, removed them, the penis being so perfectly rigid that he was enabled to do so without any section of the prepuce.

agent to be employed, and be fully satisfied of its purity—he should have a simple apparatus for its administration—he should consider the actual condition of the patient, as to the state of his health and strength at the time of exhibition—and selecting a proper position, free from constriction of any kind, he should have at hand remedies to counteract any injurious effects which may supervene. In all those details he cannot be too particular, if he wish to provide against accident, upon the non-occurrence of which he can never calculate with any certainty, in any given case. I may hence be permitted to enter somewhat at large upon this part of the subject. Chloroform, the agent at present in use for anæsthetic purposes, is familiar by name to all. It has now borne the test of more than three years' experience, and for it we are indebted to the untiring energy of Professor Simpson of Edinburgh, whose name can never be mentioned but with gratitude and respect. The advantages which this agent possesses over that first suggested, it is unnecessary for me here to specify. Suffice it to say, that the surgeon who contemplates the induction of artificial anæsthesia should accustom himself to the appearance of this agent, to its peculiar smell, and to those simple tests of its purity which are always within reach. Its specific gravity in its fluid state, and especially in a state of vapour, he should never lose sight of, all those and other particulars being of great practical value. I never use chloroform without examining it by the simple tests of litmus paper and water, and if at hand, a solution of nitrate of silver. If the former remains unaffected by the vapour, and if some of the specimen dropped into a test-glass containing either of the latter fluids, occupies the bottom of the glass as a clear transparent globule, I am satisfied that it is genuine, or at all events suited for practical purposes. But if, on the contrary, the litmus paper is reddened or bleached, and if the globule appears opalescent, or like a muddy lens, I reject it as adulterated, and unfit and unsafe for use. I mean not to attach to those tests any undue amount of preference. I am aware that there are others, but they are more adapted for the laboratory and for the chemist, and I can add, with confidence, that those I specify will answer all practical purposes. I place much confidence in them, and they are certainly more within the reach of the practical surgeon than that suggested by Professor Gregory of Edinburgh, and, as far as I can learn, they are equally valuable. That an acquaintance with these details is requisite, will be obvious from the following facts, which I select from many others I could enumerate. They are illustrative of the value of attention to the specific gravity of the vapour of chloroform, and to the smell of chloroform, with a view to its effects.

"A boy, aged about 16 years, was the subject of a morbid growth of skin, which hung in loose unwieldy folds on his back. An operation was decided on, for its partial removal. A few days previous, I subjected the boy to the vapour of chloroform with satisfactory results. The operation was necessarily performed with the boy lying on the abdomen; I administered the chloroform without reflecting on its high density; the boy was himself aware of the difference in the effects on this occasion, and there was no relief to his pain. In the after stages of the operation his position admitted of change, and with it the effects of anæsthesia were decisive. Again, a fine boy, aged about 10 years, was supposed to labour under the symptoms of stone in the bladder: he was brought to town for advice; at two separate sittings he was sounded, under the full influence of chloroform, which I knew to be genuine. The specimen was exhausted, and I was obliged to procure some, in a hurry, on a third occasion. The boy, on smelling it, at once perceived a difference, could hardly be induced to inhale it, and its effects were so distressing that he never afterwards would submit himself to the anæsthetic influence. On subsequent examination, I found that the smell was that of naphtha, and that the specimen had been made from naphtha."*

* Whilst these pages were passing through the press, a case occurred which gives additional proof of the importance of attention to the above particulars.

A servant girl had, by accident, a portion of a fine sewing needle impacted in the palm of the right hand, and previous to the attempt at its removal, I administered chloroform. My supply being small, my friend Dr. Hardy brought me some which he had

As regards the dose of the agent to be administered, Dr. F. remarks "that he is a rash practitioner who would presume, even on the most extended experience, to overwhelm his patient with such a powerful and such a treacherous drug, irrespective of the case before him. The dose commenced with should always be a minor dose, certainly not exceeding one drachm, and it should be increased according to its effects. The most desirable anæsthetic sleep I have ever witnessed, I have produced and I have sustained, during a lengthened period, with a quantity of chloroform not exceeding one drachm, whilst eight times that quantity have been wholly inefficient under apparently similar circumstances. I have mentioned that the condition of the patient, as to his state of health and strength, and his unconstrained position at the time of inhalation, form important items in the rules which should guide us in securing salutary effects from the agent. I view them as all-important, and I am of opinion that many of the unfavourable occurrences which have taken place elsewhere are mainly attributable to oversight as regards them. The infant, the child, the adult man in rude health, the aged man, the delicate female, and the man prostrated by injury or by disease, obviously require separate consideration; and the value of such distinctions will appear when the effects of anæsthesia are taken into account, where such debility and exhaustion are present, and where they are accompanied with feeble cardiac action. The case which I have already alluded to, and the particulars of which have been so honourably communicated to me to lay before the Society, are so conclusive on this point, that it is not requisite to do more than to refer to them. They will serve as a lasting lesson of caution to the surgeon under similar circumstances, at least in this country."

With respect to the position in which an anæsthetic agent should be administered, Dr. F. prefers the recumbent or semi-recumbent, either on the side or on the back, and he says, "I would never recommend its use in any other, unless there was every provision, beforehand, to place the patient instantaneously in that posture, if requisite. I would strenuously oppose any other where much delicacy or debility was present; and I would particularly insist on every article of dress being perfectly free from any constriction, especially about the neck and chest. In one instance which I witnessed, death was all but produced by the neglect of unloosing the stays of a female, and serious results arose from similar neglect in the neckcloth and shirtneck of men. In the ordinary operation for phimosis being performed by Mr. Wilmot, whilst the patient was in a sitting posture, I was administering chloroform, when I observed the man's face become pallid and his head droop. There was absolutely no pulse to be felt at the wrist, and even the action of the heart had apparently ceased. Had he not been rapidly, but cautiously, thrown into the horizontal position, to assist ordinary stimulants, he must have died. A lady who had her forearm amputated for malignant disease at the wrist mentioned to me that, preparatory to the operation, she was placed sitting in a chair, and subjected, in that position, to anæsthetic influence, and that a train of symptoms, accompanied with the most frightful prostration (but with perfect consciousness), supervened, in consequence of which the operation was deferred, and only proceeded with at her urgent request, after four or five hours delay, whilst she was in bed. Cases, doubtless, may occur where patients are in rude health, and where the peculiar

lately procured at one of our first establishments in this city, and which at the time was considered to be genuine. He had never opened the bottle, which was provided with a glass stopper, and a leather cap over it. I found its smell pungent and disagreeable, and quite different from that of pure chloroform; it was yet perfectly clear and transparent. When inhaled by the patient, it could hardly be tolerated, and it produced incessant spasmodic cough. It answered, however, to keep up the anæsthetic effect produced by the first specimen. It was afterwards found that litmus paper was reddened by it, and that free hydrochloric acid was present, and, moreover, that the same change had taken place in the contents of the bottle at the laboratory from which it was supplied. The impression is that some decomposition had taken place. This fact shows the necessity of testing every specimen of chloroform immediately before administration, as it appears that a perfectly genuine article may undergo important chemical changes. It may be a good precaution to keep the drug for immediate use, in small stopper bottles, with glass caps, and to guard them against exposure to the light.

nature of the case may sanction the selection of the sitting posture; but if so, let the surgeon recollect that he can never calculate on what contingency may arise, and let him provide accordingly, and, above all, let him be circumspect when any symptoms of even an approach to delicacy or to debility manifest themselves. Many illustrations could be brought forward confirmatory of the importance of such caution, but I feel it is not requisite to do so. I may mention, incidentally, that I never hesitate to put children under the anæsthetic influence in the mother's or in the nurse's arms, but that, as the conclusive effects appear, I at once place them recumbent.

"In speaking of the condition of a patient subjected to anæsthesia, I have alluded to that extreme state of exhaustion attendant on returning collapse from injury, or on protracted suffering from local disease, as a matter of vast moment for the consideration of the surgeon. It must never be lost sight of, and it is far better that he should never think of anæsthesia if he does not bear it prominently in view. If he adheres to one of the injunctions laid down, as regards the state of the stomach of his patient, I cannot almost understand how he can escape some fatality. I am fully alive to the importance respecting the impropriety of inducing anæsthesia immediately after a meal, but I am equally satisfied that even such a condition is less hazardous than the opposite extreme, and that in delicate females, and in persons exhausted by long-continued suffering, the very consequence sought to be avoided is rather encouraged. I have met with very unmanageable sickness of the stomach after fasting, purposely protracted with a view to the inhalation of chloroform. It is, therefore, well to avoid it. I may instance a case of congenital cataract operated on by Mr. Wilde. The subject was a delicate girl aged about 12 or 14 years. Sickness supervened during the steps of the operation, although she had had no food from the previous evening, and, moreover, the anæsthetic condition was by no means satisfactory.

"The first case of this kind in which it struck me that salutary anæsthetic effects might be secured, occurred in one of the constabulary force, a patient in Steevens' Hospital. He was the subject of disease of the knee-joint, advanced to a stage to demand amputation, and was in a state of such extreme exhaustion that the operation was not free from danger. It was most desirable to save him the shock and pain of it, and yet his condition appeared to militate against the use of chloroform, for which he was most anxious. It struck me that some dietetic stimulant might answer as a protective, and I gave him, about half an hour before the operation, some brandy beat up with the yolk of egg. The chloroform was now administered in his ward, previous to his removal to the operation theatre; the limb was removed by Mr. Wilmot, and he was replaced in bed, without knowledge or pain throughout the whole proceeding, and in a condition not appreciably different from that which preceded it. At St. Vincent's Hospital, not long since, immediately before the operation, by Dr. Bellingham, of the removal of a very painful disease of the great toe, I adopted the same expedient in a weakly woman, aged beyond 50 years, preparatory to the exhibition of chloroform, and the general remark was, that the anæsthetic effects were satisfactory throughout, and that the strength of the woman was rather improved than otherwise after the operation, although it was somewhat protracted. The case of advanced phthisis, already noted, was treated in the same manner, and others could be brought forward confirmatory of the value of such proceeding. I may, then, venture strongly to recommend to the profession, as an excellent protection in those cases of prostration or of debility in which the use of chloroform may not be otherwise contraindicated, the administration of some cordial stimulant in a small compass, before the operation. I have never witnessed the slightest attempt at sickness produced by it, and it has always acted as an efficient and safe stimulus.

"In addition to the above precautions, I would recommend the surgeon always to provide himself with a sponge and basin of cold water and a bottle of ammonia. They, with a stream of cold air about the patient, are the best remedies with which I am acquainted for controlling the anæsthetic effects of chloroform within safe limits, and by their alternate use I never hesitate to prolong those effects, and to renew them when necessary, until the object of the

surgeon is completed. I may instance a case of femoral hernia, complicated with ascites, in a man aged beyond 40 years, a patient of Dr. Bellingham's, where operation was required, and where the steps of the operation were necessarily tedious: here the anæsthetic influence was thus kept up for nearly an hour, in the intervals of the exhibition of the agent, and no inconvenience was experienced. I would, then, recommend them as indispensable adjuncts before an operation is commenced, as they may be suddenly required, and may not be so easily commanded during its performance. I never omit them."

Dr. F., like most observers, prefers the agent to be administered gradually; that free atmospheric air should be alternated with its vapour; that, throughout the whole period, care should be taken to admit it in proportion to the effects produced; and that progressive rather than sudden anæsthesia should be aimed at. "The surgeon," Dr. F. remarks, "who witnesses the effects of those anæsthetic remedies, no matter how warm an advocate he may be for their use, cannot conceal from himself the practical fact, that the most extraordinary, the most unaccountable uncertainty attends their administration, and that this is, by no means, always referable to any impurity in the agent employed. I have used chloroform very extensively, and in almost every variety of case. I have used it in the infant, in the child, in the adult, and in the aged. I have procured it from the best sources in the city, and from none, I must say, more uniformly certain as to its effects, than from Mr. Hunt. I have, moreover, procured it from Duncan and Flockhart of Edinburgh, through the talented advocate for, and originator of it, and I can unhesitatingly assert that, as regards its effects, I never could calculate with any certainty as to what they would be in any given case. I admit, as has already been alluded to, that they are much influenced by purity of agent, and by varied character of constitution, and of injury, or of disease; but I have fruitlessly attempted to establish any unerring data upon which their actual nature can be anticipated, either in order of occurrence or of intensity.* Without entering too much at large upon them, it will answer all practical purposes to consider them as premonitory, conclusive, and incidental. The two former being usually present, the last not necessarily so; the premonitory being ushered in by symptoms extremely variable, but generally indicative of momentary excitement of some one kind or other, and such often suddenly subsiding when the conclusive or true anæsthetic set in. In not a few instances, however, the premonitory continue persistent, and are accompanied with a state bordering on a regular epileptic attack, consciousness being completely annihilated, and the most extreme vascular turgescence being superadded to frightful muscular movements. Under ordinary circumstances, this stage of excitement is more manageable, and, although some little restraint is requisite, yet, by slight control, it passes off.† If such train of symptoms were not accompanied with any severe struggling or opposition on the part of the patient, I would recommend the persistence in the application of the agent until the conclusive effects were produced; but if otherwise, I would at once suspend its use. I would encourage the patient: I would reason with him, and he can often be reasoned with, and at the same time I would steal on the application, keeping the apparatus near the face. In delicate females and in children, I would be particularly circumspect in observing those precautions. I would deprecate violence of any kind: and if by persuasion, or by unobserved manipulation, I did not succeed, I would prefer suspending the inhalation altogether,

* It is, moreover, a fact worth recollecting, that the same uncertainty attends the repetition of the anæsthetic agent at different periods. I have heard persons calculate with much confidence upon producing most satisfactory anæsthetic effects, because in experimental trials, before an operation, they had succeeded; yet, on the operation table, the very opposite was the result.

† I have witnessed some few cases where absolute violence was attempted under such excited condition. In one, of an officer being operated on for fistula in ano, he jumped up off the sofa on which he had been placed, and put himself into a boxing attitude, to the no small alarm of his surgeon. It is surprising, however, how easily controllable persons are under such circumstances, and there is not the slightest recollection of the occurrence.

to rashly pressing it, when the patient appeared to be inimical to its full or salutary influence. During the cries of children, you will often succeed most satisfactorily, by playing carelessly with the sponge or other apparatus before them, when you will find that they are imperceptibly brought under the anæsthetic influence.

"Premonitory symptoms, such as the above, are occasionally totally absent; not a trace of them is to be observed. Perfect anæsthesia is as if instantaneously produced, whilst again in other cases they are merely transitory, and the conclusive supervene. Those are so characteristic as to require no special description. To the medical practitioner, they are fully indicative of the symptoms of cerebral congestion, and oppression from ordinary causes, familiar to him in practice, and he cannot witness them without somewhat of alarm. They are, in appearance, very formidable, and the surgeon cannot divest himself of a certain degree of anxiety unless he possesses an amount of rash confidence, which is always to be deprecated. When this train of symptoms manifests itself, he should at once suspend altogether the use of the agent—allow free access of air to his patient—keep up a perpetual current of reflex action, if I may so express myself, by constantly sponging the face with cold water—and renew, or otherwise, the agent according to the necessity of the case, by watching the stage of the operation, and especially the state of the circulation, as evinced by the pulse and countenance, the condition of which must guide him as to the use of ammonia, or fresh inhalation of the agent.

"Such are the conclusive or full anæsthetic effects as usually described and witnessed; but the most perfect anæsthetic sleep, and that which it would be most desirable always to establish, may exist in the absence of that apoplectic state which has just been alluded to. The countenance is calm and placid: there is an absence of vascular turgescence, capillary or otherwise; and the respiration is so tranquil that it is scarcely perceptible. Of such I have witnessed numerous instances, and some where, although tactile sensation was completely blunted, yet consciousness was not fully destroyed. Thus, a man had been operated on in one of the provincial hospitals in England for malignant cancer of the lip: a fungus sprung up from the cicatrix of the wound made in the operation, to which, after inefficient trials of other remedies, it was deemed prudent to apply the actual cautery. I put him under the influence of chloroform. The premonitory effects were mild, the conclusive placid. The man was conscious of the whole proceedings antecedent to the application of the iron at a white heat, and winced not in the slightest degree during it, remaining perfectly unmoved, and not suffering the slightest pain. I have seen the os calcis removed in a delicate strumous boy, in this form of anæsthetic sleep, when, during a dissecting operation, he was as motionless as a statue. I have seen Dr. Mayne perform Professor Syme's operation on the foot (an equally searching operation) on a young woman, under similar circumstances; and others I might extract from my note-book, and especially those of the autoplasmic class, in which this desirable condition existed. This is the anæsthetic effect which it should be the aim of all to accomplish, as in it, there is no apparent derangement or distortion of function, so unpleasant to witness in that usually produced, and so justly deemed inimical to the general application of those remedies, but unfortunately it is most uncertain in its production. Were I to hazard an opinion, I would say it was more likely to supervene in those cases where there has been much suffering and much exhaustion from protracted disease of the bones or of the joints, as met with in strumous individuals, or after injuries, where much hemorrhage and collapse has occurred; and it is well, in a practical point of view, to bear it in recollection, as such *form of anæsthesia may rapidly and unexpectedly establish itself, the dose of the agent being often remarkably small which may induce it, and the ordinary premonitory signs not always preceding it.** When the class of symptoms above alluded to super-

* The following cases may be noted:—

A child, miserably delicate, and aged about six years, was brought to hospital in the advanced stage of hip-disease, with the additional deformity of flexure of the thigh on

venes, the surgeon cannot be too cautious as to his mode of proceeding. The order of anæsthetic influence appears to be completely subverted, and he must, at once, suspend all operative proceedings until he satisfies himself about the condition of his patient. If he attempt to persist in pressing the agent, I would apprehend fatal results. He must stop its inhalation—he must substitute ammonia—he must admit fresh air, and adopt the restoratives I have already mentioned—he must watch the pulse and the colour of the countenance and lips of the patient, the latter of which I consider a very good guide to the state of the circulation and respiration—and he must only recur to the agent as the case may require it, alternating its vapour with that of ammonia.

“What I have termed the incidental effects of chloroform are not always present, but they are not the less deserving of attention. They may be primary, whereby I mean they may occur during the administration of the agent, or they may be secondary, and occur subsequent to it. They constitute those deviations from that usual course of anæsthetic symptoms with which surgeons are familiar, and must have been witnessed by any conversant with such. In persons in apparently rude health—in smokers—in persons long habituated to the use of opium, or its preparations—in persons of intemperate habits, either large eaters or drinkers, I have often observed that the course of anæsthesia is irregular.* In persons of a nervous or hysterical temperament, both males and females, it is by no means unfrequent to meet with those incidental symptoms. The premonitory, at the commencement, bear some slight similarity to those usually presenting themselves. The conclusive, in many such cases, *cannot be accomplished*, the system appearing to be absolutely unsusceptible of their supervenition. Violent convulsions occur, sometimes engaging the whole muscular system. The contents of the bladder and of the rectum are discharged, and, in other instances, you have all the ordinary attendants on a regular fit of hysteria, such as laughing, crying, and sobbing respiration. During this train of symptoms, there is often a certain amount of consciousness, and if the special object of the surgeon be accomplished, be it operative or otherwise, all tactile sensation appears to be destroyed, as afterwards learned from the patient, although

the pelvis. The limb was extended under the influence of chloroform, the effects of which were instantaneous, and unaccompanied by any of the ordinary conclusive signs.

A boy, aged between 10 and 12 years, had his right upper extremity caught between the rollers of a paper machine. An extensive lacerated wound occupied the upper third of the arm, through which the fractured ends of the humerus could be seen, jagged and spiculated, some detached portions of bone also lying in the wound. The forearm presented, in the integuments and fascia, a longitudinal rent, through which torn portions of muscles protruded, the bones being bared, but not broken. The unfortunate boy was screeching with agony, and with dread at the approach of the surgeon. Under the most rapid and placid anæsthetic influence of chloroform, the limb was adjusted, and from day to day it was dressed, he being, at each dressing, placed in a similar state, and so freed from necessarily intense suffering, the quantity of the agent used on each occasion being under one drachm.

* That this untoward course of anæsthetic effects is not owing to any impurity in the drug, or in its mode of exhibition, may, I think, be assumed from the following case which I witnessed in the Royal Infirmary of Edinburgh in January, 1849, when passing through that city. The case was under the care of Professor Miller, whose advocacy for surgical anæsthesia, and whose valuable remarks on the subject, are, I should suppose, familiar to most members of the Society. A man, aged somewhat about 25 or 30, had dislocated his shoulder some weeks previous to his admission into the infirmary. He was carried into the operation theatre on a couch, and, in the horizontal position, was subjected to the influence of chloroform, in no very measured amount, from an ordinary towel, funnel-shaped. The usual conclusive effects were not produced; the man, when the means for the reduction of the dislocation were applied, resembled one labouring under an aggravated epileptic attack. His countenance was bloated and congested, and the automatic movements of the different muscles were very formidable. The dislocation did not appear to me to be reduced. I afterwards learned that this man was of most intemperate habits. I may add, that he quickly recovered from the effects of the agent, and that he stated to me he was wholly unconscious of pain, or the proceedings gone through.

there are strong external manifestations of extreme suffering. It is in this condition of the patient that the secondary incidental symptoms are often most alarming, if the surgeon is not prepared for their presence, and I am strongly disposed to the opinion, that the cumulative properties of the drug, as they are termed, manifest themselves more decidedly here than in any other case.

"There is nausea, vomiting, pallor of the countenance, and extreme debility, as evinced by a pulse hardly perceptible, by cold extremities, and a proportionate amount of cerebral oppression. I have not seen any fatal results from such symptoms, but I have seen them persistent for two, three, four hours, requiring the most studied exhibition of stimulants to remove them; and, what is still more remarkable, they will occasionally recur at irregular intervals, after their apparent subsidence. It is, however, but right that we should bear in mind, that an identical train of symptoms may supervene, where artificial anæsthesia has not been had recourse to, in subjects of the same class, after an unusual excitement of the nervous system, no matter from what cause originating. In a practical point of view, it is most important that we should recollect the possible occurrence of such symptoms, as it will be a guide to us not to press the agent with a view to its conclusive effects, under the circumstances. I could instance cases of this description where undoubtedly the advocate for anæsthetic agents should hesitate to subject his patient to their influence, could he anticipate such results. The symptoms are so distressing, even as regards the mental sensations of the patient, that, should any circumstances require subsequent surgical interference, he never can be induced to submit himself to a repetition of them. I have fancied that I have prevented this effect of chloroform by the exhibition of an anti-hysterical draught before its inhalation, in an apparently hysterical female, but my experience is too limited to venture to speak with any confidence respecting it. The expedient may be worth consideration.

"There are circumstances connected with the effects of chloroform, or other anæsthetic agents, as regards the wound, the seat of operation, which are very interesting—namely, the condition of the blood—the condition of the muscles, especially in amputations—the occurrence of after-pains or of hemorrhage, and the possible interference with healthy reparative processes. Each and all of those subjects deserve much attention, but I must only glance at them. I am disposed to say, as regards the blood, that I have more frequently observed its natural appearance in the respective vessels than otherwise—that I have seen excellent formed stumps after anæsthetic amputations—that primary hemorrhage is decidedly more the exception than the rule in similar cases*—and that reparative processes have not particularly attracted my attention as interfered with or deranged since the introduction of anæsthesia. These are subjects, however, which must be considered to be, as yet, unsettled. Indeed, it appears to me that, with respect to the whole subject of artificial anæsthesia, we are yet in the infancy of our knowledge, and that the stamp of the conclusive effects of chloroform in one set of cases is so diametrically opposite to that met with in others, it, in my opinion, proves that we have yet to learn the true secret of its salutary administration. I am, however, an advocate for its use in operative surgery, but I am so within restricted limits. In the details given of its effects I have not concealed the dangers and the difficulties to be encountered by the surgeon: on the contrary, I have enumerated many, and I venture to hope that I have suggested the means whereby some may be removed or lessened. I yet contemplate the adoption of anæsthesia in every instance with anxiety, and I hence deprecate it unless the serious nature of the case demands it.† I am

* The subject of hemorrhage, after operations, and that of the reparation of such wounds in anæsthetic cases, I have, in conjunction with Mr. Wilmot, particularly investigated. Mr. Wilmot's opportunities, when resident surgeon in Steevens' Hospital, were considerable, and he hesitates not to confirm the opinion of the comparatively rare occurrence of the one, and the non-interruption of the ordinary healthy processes in the other, the symptomatic fever being unquestionably less violent, and that reaction on the nervous shock attendant on operation being almost nullified.

† The operation which the advocates for anæsthesia recommend the skeptic to witness, is that of lithotomy. I lately placed a child, aged about two years, the subject of

strongly opposed to it in trifling, passing operations. I am favourable to it in all severe operative proceedings, with the exceptions I have noted, and with the precautions I have specified, and I have witnessed such transcendent, such indescribable benefits from it, both in allaying the shock and in abrogating or mitigating the pain attendant on injuries and on operations, that I cannot too strongly impress on the minds of all, the imperative duty of studying its effects, whereby its proper and safe adoption may be secured, and the moral and medical arguments against its use be substantially lessened.*

"One of the most interesting and most happy effects of chloroform I have ever witnessed occurred in the following distressing case, in April, 1849:—

"A young lady, of highly cultivated mind, aged about 25 years, and unmarried, was obliged to submit to amputation of her thigh, for malignant disease engaging the bones of the leg. She had heard of chloroform, and was anxious to learn particulars respecting it, but had, by no means, made up her mind to submit to its influence. I had recourse to the device (which is occasionally admissible, particularly in children) of sprinkling some Eau de Cologne on the outer sponge of the apparatus—the inner being already saturated with chloroform; she was sitting in bed, and in conversation with Sir Philip Crampton, when, taking the apparatus in her hand to examine it, she commenced to inhale from it. After some few minutes, I observed that she was somewhat incoherent and unconscious. I took the apparatus from her, renewed the chloroform, and in a second or so, she lay tranquilly back in our arms. We carried her to the adjoining room, where the necessary appliances for amputation had been previously prepared. The details of the operation were gone through by Mr. Colles, whose patient she was; she was afterwards replaced in bed, and all this occurred without any suffering on her part, and in complete ignorance of all proceedings. It was not without some difficulty that Sir Philip Crampton could persuade her that the operation had been performed. Here, then, was true anæsthetic sleep—no stertor—all was perfectly placid."

21. *Acute Traumatic Tetanus treated with Chloroform.*—R. G. H. BUTCHER, Esq., relates (*Dublin Med. Press*, July 30th, 1851) a case of acute traumatic tetanus, in a boy eight years of age, treated by the inhalation of chloroform. The article rendered the paroxysms shorter, and mitigated their violence, but, as in the other cases reported, did not arrest the disease; and the patient died twenty-four hours after first complaining of stiffness of the neck and difficulty of swallowing, and twenty hours after the accession of the first paroxysm.

such, under its influence. The child was a patient in the Meath Hospital, and was operated on by Mr. Smyly, and all who witnessed the operation must have been gratified. Cases of other children I might also enumerate. I will merely remark that, in Ireland, patients are not always as still and as motionless (though in profound sleep) as elsewhere depicted, and Irish surgeons will bear this in recollection. The same automatic muscular movements occur, as too often witnessed in amputation.

* I am gratified to have the permission of Sir P. Crampton to publish the following very apposite letter on this subject. Coming from an authority so justly estimated and so highly respected, it cannot fail to produce proportionate good:—

"Merrion-square, January 12, 1851.

"DEAR FLEMING.—With reference to your inquiry, 'whether I have found artificial anæsthesia beneficial or otherwise in surgical cases,' I have no hesitation in stating that I have found it eminently beneficial, not merely in cases of operation, but of severe injury, and of neuralgic affections, unconnected with injury. I have seen chloroform and ether employed in numerous cases both in London and Dublin, and having myself employed them extensively both in public and in private practice. Up to this period, I have never seen artificial anæsthesia productive of any serious inconvenience; whilst its power of preventing or greatly diminishing pain has been decisive. I am far, however, from asserting, that fatal consequences have not occasionally resulted from its use. I trust, however, that a more extended experience will lead to the discovery of means of employing this powerful agent, which, without impairing its effects, will render it more safe.

"Believe me very sincerely yours,

"PHILIP CRAMPTON."

22. *On the Use of Collodion in Ingrowing Nail.*—M. MEYNIER treats this affection by pressing down the fleshy portion, and pouring in between this and the edge of the nail a small quantity of collodion, which soon solidifies, induces rapid cicatrization of the ulceration, and, when the disease does not arise from an abnormal shape of the nail, procures a cure. M. H. Larrey has recently tried the plan in five cases, and succeeded in four of these.—*Bull. de Thérap.*, tom. xl. p. 185.

23. *Some Observations on the Pathology of those Affections of the Ear which produce Disease in the Brain.* By JOSEPH TOYNBEE, F. R. S. ("Proceedings" of Royal Med. Chirurg. Society, June 24, 1851.)—In this communication the author has a twofold object: the first is to point out the nature of the several affections of the ear which produce disease in the brain; the second to show that each of the cavities of the ear has its particular division of the encephalon, to which it communicates disease. Thus, that—

1. Affections of the external meatus and mastoid cells produce disease in the lateral sinus and cerebellum.

2. Affections of the tympanic cavity produce disease in the cerebrum.

3. Affections of the vestibule and cochlea produce disease in the medulla oblongata.

1. In speaking of the external meatus, its intimate relations with the lateral sinus and cerebellum are pointed out; the affection most frequently producing disease in these parts is shown to be catarrhal inflammation of its dermoid layer, one of the numerous diseases which have hitherto been classed together under the term otorrhœa. This affection of the external meatus is fully described; and it is shown that it is found to endure during many years, without the presence of pain, or any other symptom calculated to apprise the surgeon of the presence of a formidable disease, while the bone may be becoming slowly carious, and portions of the dura mater and cerebellum disorganized.

In the second division of the paper, the tympanic cavity is described to be the part of the ear from which disease is most frequently propagated to the brain. This circumstance is accounted for, first, by the great liability of the mucous membrane of the tympanum to undergo pathological changes; and, secondly, by the existence of very intimate relations between this membrane and the dura mater. The affection of the tympanum which most frequently produces disease in the cerebrum is chronic catarrhal inflammation of the mucous membrane, an affection thus far only known as an otorrhœa. The four changes in the dura mater and cerebrum produced by the affections of the tympanum are—

1. Inflammation of the dura mater, and its separation from the surface of the petrous bone by serum.

2. Ulceration of the dura mater, and its complete detachment from the petrous bone.

3. An abscess in the substance of the cerebrum.

4. Undefined suppuration of the substance of the cerebrum.

From a careful examination of cases, it appears that chronic catarrhal inflammation of the mucous membrane of the tympanum may exist as many as twenty or more years, without the production of any disease beyond it, or at least without the existence of symptoms by means of which the presence of such disease can be diagnosed; nevertheless, in the great majority of cases, vital structures become sensibly affected in a much shorter period.

The third section of the paper is devoted to the consideration of the labyrinth, and it is shown that purulent matter in the vestibule or cochlea sometimes causes disease of the auditory nerve, which is transmitted to the medulla oblongata, producing suppurative inflammation of the meninges, and death, without the presence of any caries of the bone.

In the course of this paper, the author shows the necessity of abolishing the use of the term otorrhœa, and of using in its place the names of the several diseases, eight in number, of which a discharge from the ear is one of the symptoms. In conclusion, the facts which he is desirous of impressing upon the minds of medical men are, that the bone, dura mater, and substance of the

brain may be slowly undergoing disorganization, without the presence of any other symptoms calculated to reveal to the medical man the existence of formidable disease, than the presence of a discharge from the external auditory meatus; and that, consequently, no person suffering from catarrhal inflammation of the dermoid layer of the meatus, the membrana tympani, or of the mucous membrane of the tympanum, can be assured that disease is not being prolonged to the temporal bone, the brain, and its membranes; and that any ordinary exciting cause, as an attack of fever or influenza, a blow on the head, &c., may not induce the appearance of acute symptoms, which, as a general rule, are speedily fatal. Appended to the paper are tables, giving the particulars of sixty-five cases of disease extending from the ear to the brain, in which tables the duration of the chronic and acute symptoms, and the post-mortem appearances, are concisely detailed.—*Lancet*, July 5, 1851.

24. *Treatment of Aneurism by Compression.*—The journals of the last three months contain the reports of several cases in which compression was resorted to for the cure of aneurism; and, as the profession seem now disposed to give this mode of treatment a fair trial, we shall doubtless in a short time have ample materials from which to form an estimate of its value, and the cases to which it is particularly appropriate.

We subjoin a summary of the observations which have been recently made.

25. *Case of Popliteal Aneurism treated by Compression; with Remarks, and a List of the Cases treated in Dublin.* By O'B. BELLINGHAM, M. D. (Read to the Royal Medical and Chirurgical Society, June 10, 1851.)—The subject of this case was a labourer, aged forty-two, who was admitted into St Vincent's Hospital, under Mr. Bellingham's care, in November, 1850. The aneurism, which was of large size, was seated on the right side; had a strong, heaving impulse, and a short, harsh bruit was heard on auscultation over it. The treatment was commenced by placing the patient upon a very restricted diet, particularly as regards fluids (six ounces only being allowed in the day, with eight ounces of solid food), confining him strictly to the horizontal posture, with a dose of purgative medicine each night. Under this treatment, continued for some days, the pulse, from being hard and incompressible, became soft, small, and slow. Compression was commenced December 4th, at eleven A.M., by means of two instruments, one upon the artery where it crosses the ramus of the pubis, the other at the lower third of the thigh. At half-past eight P.M., the outlines of the aneurismal sac were more distinct; the patient's skin was cool, and he did not complain of pain. He remained awake during the night, and kept up the compression himself, the points upon which the pad of the instrument should rest having been marked with ink. Next morning, between nine and ten, on unscrewing the instrument, the pulsation of the aneurism was found to have ceased; the tumour was hard, solid, and circumscribed, and an enlarged collateral vessel was felt over the centre of the popliteal region. Moderate pressure was continued for some days; the patient was kept in bed, and the diet was gradually improved. The tumour diminished in size, and became harder, and when the patient returned home, the limb was as strong as the other, and his general health perfectly good. Some remarks upon the treatment of aneurism by compression followed, in which the author contrasted the results of compression and the ligature, and pointed to the advantages likely to ensue from combining constitutional with local treatment. In a table appended to the paper, the author has given a list of all the cases of external aneurism treated by compression in Dublin during the last seven years, in which the seat of the disease is mentioned, the hospital or other locality where the treatment was conducted, the surgeon's name who had the management of the case, and the results are stated. Of these, it appears that twenty-six were cases of popliteal aneurism, twenty-one of which were cured; six were cases of femoral aneurism, of which five were cured, the sixth having been a form of traumatic aneurism in which amputation of the limb was the only resource. Three were cases of brachial aneurism, of which two were cured; in the other, a high bifurcation of the brachial artery existed, and two

vessels required to be tied. One was a case of radial aneurism, which was cured by compression. Of the remaining five cases of popliteal aneurism, amputation of the limb was performed in one, the patient recovering; in a second, the ligature was used with success; in a third, the patient was obliged to return to his employment before the cure of the disease; the aneurism diminished in size, and the patient continued to work for above three years afterwards, when symptoms of aortal aneurism supervened, under which he sank. In a fourth, the patient died of pulmonary disease, and the fifth patient, who was of a broken-down constitution, died of erysipelas.—*Lancet*, June 21, 1851.

26. *Popliteal Aneurism; Pressure; Deligation of the Femoral Artery; Recovery.*—The following case occurred under the care of Mr. LAWRENCE, and is reported in the *Lancet* (July 19th, 1851). William J—, aged thirty-one years, waterman, light complexion, short stature, and habitual good health, was admitted into Bentley ward, January 27, 1851, under the care of Mr. Lawrence. The patient states that his habits have generally been temperate, that he has not overworked himself, and that the only ailment he had had to complain of was an occasional pain in the chest. Seven months before admission, he noticed in the right popliteal space a tumour of the size of a marble, which pulsated visibly; the circumstance caused him, however, no alarm, and he was content to rub the tumour with turpentine, without seeking for medical aid. The tumour, however, gradually increased in size, without giving intense pain, and the patient was enabled to attend to his occupation up to two days before admission.

When examined, the tumour was found to be of the size of an orange, situated in the centre of the popliteal space, and presenting very strong pulsations. The hand applied over the swelling received the sensation of a distinct thrill, and a loud bruit was heard on the application of the stethoscope. The patient did not complain of a great amount of pain, neither in the tumour nor in the leg, and the rest of the arterial system seemed in a sound condition.

Mr. Lawrence resolved to try compression of the femoral artery in order to arrest the progress of the disease, and on the 31st of January, four days after admission, a compressing apparatus was applied. It was the usual clamp-shaped instrument, provided with two pads connected with the steel rings (which encircled the thigh without compressing it) by screws of spring materials, the upper part of the screws working as ball and socket. One of the pads was made to press upon the artery in the groin, the other in Scarpa's space, and they were intended to act alternately.

By the use of this instrument, the pulsations of the tumour were completely arrested; the patient, however, stated that the pressure gave him intense pain, and that he should probably not be able to bear the compression long. Nor did his feelings deceive him, for he could endure the apparatus but two hours, at the end of which time it was removed. On the 4th of February, four days after the first application of pressure, Mr. Lawrence proceeded to place a ligature on the femoral artery, the patient having been rendered insensible by chloroform. The artery was tied in Scarpa's space in the usual manner. The pulsations of the tumour ceased immediately, and have never returned.

No untoward symptoms whatsoever marked the progress of the case, and so thoroughly did the collateral circulation become established in a short time, that the limb did not sensibly lose any of its natural temperature, though no cotton-wool nor flannel wrappings were used. The patient did not complain of pain in the leg, and he seemed to experience no uneasiness but what might be expected from a common wound in the thigh.

Ten days after the deligation of the vessel, there was a little numbness in the foot; the latter was, however, not cold, and the wound in the thigh looked well. The tumour in the ham had now become quite hard; there was no thrill or pulsation to be noticed in it, though the size had not materially decreased. The swelling gradually diminished, however, the patient progressed very satisfactorily, and on the 28th of March, about seven weeks after the deligation of the

femoral artery, he was discharged in good condition, the tumour having decreased to the size of a pigeon's egg, and being of very firm consistence.

The only complaint the man had made during the latter days of his stay in the hospital was of tightness and pain in the chest, unaccompanied, however, by shortness of breath. The stethoscope applied to the region of the heart did not afford any bruit or abnormal sound about that viscus.

27. *Aneurismal Dilatation of the Popliteal Artery, treated by Pressure.*—By JAMES PAGET, M. D.—The subject of this case was a gentleman, 27 years of age, tall and thin, who had enjoyed good health until October 1845, when he was injured by some boards falling across his legs, after which he suffered severe pain in his knees and legs, and muscles of calf of left leg whenever he walked. Just before Christmas, 1849, he found a pulsating tumour in left ham, which increased until seen by Dr. Paget, 9th of Jan. 1850. At this time, there was in the left ham a tumour of oval form, having its long axis parallel with that of the limb, and measuring two and a half inches by two. It pulsated very forcibly, and equally on all parts of its circumference, and, with pulsation, felt as if it thrilled. A loud bellows sound was audible with the ear placed over the tumour, or over the artery above it. The pulse in the left dorsal artery of the foot was rather feeble than that in the right; but Dr. P. could detect no difference in time between them. The skin over the swelling was tense; but its tissue, like that of all the adjacent parts, appeared completely healthy. There was, indeed, no other appearance of disease, either local or general.

The treatment was commenced on the 31st of January, when first pressure was made to the femoral artery, with one of Dr. Carte's tourniquets. Two instruments were applied, and alternately tightened and relaxed. These caused great pain; and after the fourth week, were changed for the Italian tourniquet. From this time till the 16th of February, the size of the aneurism decreased; but, after ten days, no further progress was made. On the 21st of March, the diminution recommenced; and by the 18th of April it was reduced to the size of a hazelnut, but still pulsated freely. After eleven weeks' confinement, the patient's patience became exhausted, and he wished to move about; but modified pressure was kept up for six weeks longer, when pulsation one morning suddenly ceased, and the aneurism was cured.

In commenting upon this case, Mr. Paget remarks, that the disease was probably an example of aneurismal dilatation, or, as Mr. Luke has named it, tubular aneurism; an aneurism of the cylindriciform or fusiform variety described by Cruveilhier—that is, a dilatation affecting, almost uniformly, the whole circumference of the artery in a certain portion of its length. Such dilatations are very rare in the popliteal artery; yet that such a one existed here is made very probable by many things observed in the case, and especially by the great diminution of size of the aneurism while under treatment.

The cure of popliteal and similar aneurisms, whether treated by pressure or ligature, is (Mr. Paget remarks) usually accomplished much more by the filling of the sac with blood-clots, than by the contraction of the sac. Hence, usually, after the pulsation had ceased, the swelling, with comparatively little diminution of size, remains firm and nearly solid, till slowly its size is diminished by the absorption and shrinking of its contents. When, however, as in the case here related, a popliteal aneurism consists in a dilatation of the whole circumference of the artery, we may believe that there is the same indisposition to the formation of clot as in the similar dilatations of the arch of the aorta, and of other great arteries in which no part of the dilatation is far remote from the main stream of blood. In all these cases, it is a matter of common and just observation, that fibrinous deposits are scanty and rare; and, therefore, in the similar dilatations of the smaller arteries, we might expect that the effect of any continued obstruction of the trunk would be the gradual contraction of the dilated portion, rather than its filling up with clot.

Other considerations, Mr. Paget thinks, strengthen this opinion of the nature of the case here related; especially, first, that as the enlargement of the artery after the injury was very slow, there was probably no rupture or serious damage of its coats, but that such a change as might lead to their slow and exten-

sive impairment of structure; and, secondly, that the sensation derived from the touch of the dilatation was always that of a sac tensely filled with fluid, and containing no clots, such as are almost constantly found in saccular aneurisms, *i. e.*, partial or lateral dilatations of the arterial walls.

Commenting on the results of the treatment of this case, by pressure on the trunk of the artery above the aneurism, Mr. Paget thinks that, considering that the patient was instructed in surgery, and well understood the plan on which the treatment was to be conducted, that he had himself chosen this plan of treatment, and submitted to it without interruption, and that it was attended with no local injury or other inconvenience, few cases could have been better suited to the plan; yet so long a period elapsed prior to the cure, that he would not advise it in preference to ligature. He does not, however, discountenance compression, being disposed to attribute its tediousness, in the present case, to the peculiarity of the tumour above alluded to.—*Prov. Med. and Surg. Journ.*, July 23, 1851.

23. *Popliteal Aneurism—Treatment by Pressure—Deligation of the Artery—Gangrene—Death.*—Hugh M—, aged 43, a man of spare make and nervous temperament, was admitted into Guy's Hospital under Mr. HILTON, Dec. 21, 1851. As a porter, he was in the habit of straining his legs considerably. For some time past the patient has not drunk to excess, but formerly he was very intemperate, and on being closely questioned as to any blow or injury he may have sustained, nothing of the kind is discovered. One year ago the leg and ankle swelled at times, and nine months since the patient perceived a swelling like a walnut in the ham of the left leg. No attention was, however, paid to this symptom, until a fortnight before admission, when such sudden pain seized the patient, that he could not place his leg on the ground; and he now, for the first time, noticed a pulsation in the popliteal tumour, the latter extending from the ham to the calf of the leg. The pain has since become much worse, and includes the whole thigh and leg.

On examination, a deep-seated, soft, fluctuating, and pulsating tumour was discovered, extending from the popliteal region into the calf of the leg; it diminished in size by pressure on the femoral artery, and the reverse happened when the artery was compressed below the tumour. The usual symptoms of popliteal aneurism, including a distinct bruit, were present.

Mr. Hilton prescribed rest, an elevated position to the limb, the pain to be combated with opium, and the thigh and leg to be carefully bandaged from the toes upwards. About a fortnight after admission, Mr. Hilton had an apparatus applied for the compression of the artery. It was composed of two separate instruments; the one, fixed to the pelvis, was intended to press on the artery in its course of the head of the femur; the other, applied to the thigh about half-way down, was to compress the vessel in Scarpa's space. The pulsation was not arrested by the use of these instruments, but only moderated.

The patient bore the pressure pretty well, complained only of a little cramp in the leg, and stated that the acute suffering he experienced in the limb before the apparatus was put on, was now quite removed. On the third day after the commencement of pressure, scarcely any bruit or pulsation was left in the sac, the latter was less tender and swollen, and the patient could almost straighten his leg, though he had in it a sensation of numbness and tingling.

On the fifth day he began to feel uneasy and complained of the pressure; the pain in the leg had returned, the tumour was larger and softer, and the pulsation much more forcible. On the eighth day the pain in the leg and foot was much increased, and at six in the evening the suffering was so intense that the patient could not bear the pressure or even allow the limb to be touched; the apparatus was, therefore, removed, and a drachm of laudanum administered.

Mr. Hilton now directed digitalis to be given internally, and ice to be applied to the outer side of the tumour. The ice gave much pain and was discontinued. The tumour was, however, becoming larger, and the pulsation scarcely perceptible on the inner, but more distinct on the outer side. On the tenth day after the first application of pressure, Mr. Bransby Cooper, Mr. Cock, and Mr. Hil-

ton, held a consultation on the case, and it was agreed that the artery should be tied in the upper part of the thigh.

The operation was, however, delayed for a couple of days, as active inflammation was going on in the artery and limb. The thumb lightly pressed on the femoral artery caused intense pain, both in the course of the vessel, and the whole limb; it might thus be conjectured what distressing symptoms the ligature would occasion. The patient was placed under an antiphlogistic treatment, with purgatives, &c., and as pressure could no longer be borne, Mr. Hilton had no alternative but to tie the artery (under unfavourable circumstances) or remove the leg. The first of these measures was preferred, and Mr. Hilton put a ligature on the femoral artery, about the middle of the thigh. The coats of the vessel were found much thickened and infiltrated; the patient was at once put into a warm bed, the foot and leg comfortably wrapped up in flannel.

Half an hour passed in comparative ease, when suddenly pain of the most intense and agonizing kind in the whole of the left thigh and leg seized the patient. Large doses of opium were administered, and chloroform inhaled two different times without alleviation. Opium given continuously at last procured sleep, and the patient rested the whole night and part of the following day. The man now complained no longer of pain, but of numbness; the tongue became brown and dry, and the pulse beat 110, small and weak.

On the third day after the deligation of the artery, the pain was absent, the patient slept well, the tumour became harder, diminished in size, and the pulsations did not return. Matters went on very favourably until the tenth day, when shivering occurred, and pain arose in the foot, which was now beginning to fail in keeping up its proper temperature. Wine was now ordered, and the pain having two days afterwards become very violent in the leg and around the knee, Mr. Hilton made a small opening in the sac at its inner and lower part, and allowed three or four ounces of dark, grumous, exceedingly fetid and purulent blood to escape.

Some effusion around the knee-joint was now noticed; a small opening was therefore made on its internal and inferior aspect; but no freeing of matter ensued. Pain and stiffness in the left elbow-joint were now complained of: a little more blood was allowed to issue from the aneurismal sac, and a plug of lint placed in the aperture. The patient now took as much as twelve ounces of wine a day, and though the pain in the elbow-joint diminished, it now declared itself on the shoulder, and intense heat attacked the affected leg and foot. Pulse 130, irregular.

On the 1st of February, being the fifteenth day after the application of the ligature, the pain had ceased, but the patient was extremely depressed; the toes on the left side, with a great portion of the foot, became insensible, and of a mottled purple colour; the wound of the thigh remained stationary and the ligature firm.

On the eighteenth day the general symptoms were worse, the gangrene spread over the whole foot and half way up the leg; several vesicles formed, and a quantity of bloody serum escaped from some of these. A line of separation appeared to form a little above the middle of the leg; but the patient, in spite of the stimulants which were plentifully given, became so exhausted that he died on the twenty-second day after the deligation of the artery, one month after the application of pressure, and six weeks after admission.

On a post-mortem examination, pus was found in the elbow, shoulder, and knee-joints. The viscera were tolerably healthy, and no ossific deposit was observed in the femoral or any other artery.

After the perusal of the foregoing case, it will become evident that pressure is a very unfavourable forerunner to the ligature, and that there are patients with whom all methods of treatment, from nervous susceptibility and want of tone, fail of yielding good results.—*Lancet*, June 14, 1851.

29. *Popliteal Aneurism Cured by Pressure on the Femoral Artery.*—A case of this is recorded by Dr. W. WARD, of Huntingdon, in the *Prov. Med. and Surg. Journ.* (July 9th, 1851). The subject of it, aged 36, an ostler, who had always enjoyed good health, was admitted into the Huntingdonshire Infirmary, March

13th, 1847, with a somewhat diffused swelling on the popliteal space, which had a distinct pulsation through its whole extent, especially on the outside. Upon compressing the femoral artery, the pulsation ceases, and the tumour diminishes in size; the stethoscope gives a distinct *bruit de soufflet*; the tumour appears about the size of a small egg; there is great pain felt in the tumour, which prevents his sleeping at night; the general health is good; the heart's sounds are normal; the posterior tibial can be distinctly felt, although pulsating feebly; the anterior tibial more feeble, and not so distinct.

On the 19th March, Signorini's tourniquet was applied over the superficial femoral, at the upper third of the thigh, not to completely stop the circulation, but only to impede it, the intention being not to apply pressure too forcibly at first. It was borne very well for a few hours, when the tourniquet was slightly slackened by the patient. Before the application of the tourniquet the temperature of the affected limb below the knee was lower than the sound one; three or four hours afterwards the temperature increased, and became higher than the other, and a slight swelling of the foot and leg appeared.

20th. Had no sleep; at intervals has tightened and slackened the tourniquet; the posterior tibial can be felt beating distinctly; there is slight oedema of the limb. The circumference of the sound limb is thirteen inches and a half, that of the affected seventeen inches, measured round the knee. Ordered an aperient. Pulse 80; tongue clean; slight thirst.

21st. Slept tolerably well; there is considerable swelling of the leg; bowels open from an aperient.

22d. Slept but little; obliged to slacken the tourniquet, or could not sleep; pulse 84; slight thirst; the temperature of the leg higher than the sound one; felt much ease from the application of Goulard lotion to the foot and leg. Size of the limb seventeen inches. On removing the pressure, pulsation of the tumour more feeble than before it was applied. The posterior tibial artery cannot be felt, probably owing, in part, to the swelling of the foot.

This treatment was continued, with variation of the pressure according to circumstances.

April 22d. For the last three weeks he has had no pain under the ham, and the aneurismal tumour has considerably diminished, and so altered in its character as to leave little doubt that the aneurism is becoming obliterated. Pulsation in the posterior and anterior tibial cannot be felt. During the whole of this month slight pulsation could occasionally be felt, and pressure was continued, with occasional intermission.

In the middle of June, some slight pulsation with bruit still continuing, the pressure, which had been left off, was reapplied. This was continued for three weeks, when no further pulsation could be felt.

Aug. 28th. There is now little or no swelling to be perceived in the ham; no pain upon walking; no pulsation. There is a slight bruit to be heard when the leg is flexed, and the stethoscope pressed deeply into the popliteal space; but this is probably produced by the compact coagulum around the artery. Discharged.

June, 1851. Up to the present time continues perfectly well.

30. *Account of the Dissection of a Case in which two Popliteal Aneurisms had been treated by Compression of the Femoral Arteries.* By PRESCOTT HEWETT, Assistant Surgeon St. George's Hospital. ("Proceedings" of Royal Medical Chirurgical Society, June 10, 1851.)—A man, aged thirty-eight, was admitted into St. George's Hospital in the middle of 1848, under Mr. Cutler, with an aneurismal tumour in each ham. That on the right side, completely filling this region, was compressible, but could not be emptied; that on the left, not larger than a small egg, was hard, and to a great degree apparently solid, and with much less pulsation. The tumour on the right side had only existed three months, and nothing had been done for it. From the account of the patient it appeared that the disease on the left side, which had begun about eighteen months back, had been treated by compression of the femoral artery, at the Wexford Infirmary, where the pressure had been kept up, more or less, for seventeen weeks, during which time the limb had regained its natural size,

and the tumour was reduced to its present state, from which it has never since varied, and has caused him but little inconvenience. His general health, which had begun to give way about two years and a half back, had prevented him from following his business of musical instrument-maker. When admitted into the hospital, he was pallid and apparently suffering from great debility. At a consultation of the surgeons, it was determined, under existing circumstances, that compression should first be applied to the right femoral artery, and the instrument, a ring tourniquet, was so adapted as only to lessen the circulation in the limb, and to be worn for a few hours daily. In some little time the limb was reduced in size, and the tumour became smaller and firmer, but pulsation still remained. Some six weeks after his admission, and whilst under surgical treatment, cough and expectoration, with difficulty of breathing, made their appearance. Auscultation detected nothing abnormal about the heart, but the lungs were found to be engorged at the back part. The chest symptoms went on increasing in severity, and the patient one day suddenly brought up a large quantity of arterial blood, and died shortly afterwards. The tumour in the right ham had gone on decreasing in size, and had become firmer and more solid, but some pulsation was still felt. No change had occurred in the left ham.

At the examination of the body, which took place thirty-one hours after death, the left aneurismal tumour, deeply imbedded in the popliteal space, was found lying between the joint and the artery, of the size of an egg; it was pyriform in shape, and apparently quite solid, but on cutting into it the lower half only was filled with long-standing coagula; the upper part, still presenting a cavity lined throughout by a perfectly smooth membrane continuous with the coat of the artery, merely contained some small recent clots. Of the two openings into the sac, the upper one was large, and nearly of the size of the artery; the lower one, on the contrary, was much contracted, and scarcely admitted a common-sized probe. The portion of the artery lying upon the sac was also very much contracted, but its coats were healthy, as well as those of the posterior and anterior tibial vessels, which were of their normal size. In the upper part of the popliteal, and in several parts of the femoral, there were large patches of atheroma, with three distinct aneurismal dilatations, one in the former vessel and two in the latter. The femoral artery and vein were pervious in their whole length, and the surrounding cellular tissue was not thickened. The vein and the nerve in the popliteal space were firmly adherent to the sac with a few of the fibres of the gastrocnemius muscle. The aneurism on the right side, larger than a cricket-ball, was also lying between the artery and the knee, to which it was firmly adherent. It was filled with laminated coagula, save at the back part, where there was still a small channel leading from the upper into the lower part of the vessel; this channel was rough throughout, and covered with recent fibrine. The upper opening of this channel was free and smooth; the lower one was small, and below it the artery was reduced to the size of the posterior tibial. Above the aneurism the coats of the artery were much thickened by atheroma, and here too, about an inch and a half above the tumour, was another small aneurismal dilatation. The femoral artery presented several patches of atheroma, but it was otherwise healthy, and, as well as the vein, pervious throughout its whole course: the surrounding cellular tissue was not thickened. With regard to the popliteal vein and nerve, the appearances were the same as those observed on the left side. The thoracic aorta was extensively affected with atheroma throughout a great part of its course, and it was somewhat dilated. In its arch, it presented three distinct aneurisms, one of which, the largest, was lying between the large vessels and the windpipe, into which it had burst by a small ulcerated opening, about an inch above the bronchi: the cavity of this sac was partly lined with long-standing coagula. The bronchi were filled with blood, in addition to which the lungs themselves presented several large patches of pulmonary apoplexy, and were extensively affected with emphysema. All the abdominal organs were healthy, excepting the kidneys, which were somewhat smaller than natural, rough on their surface, and with several small cysts in their structure.—*Lancet*, June 21, 1851.

31. *Treatment of Strictures of the Urethra.*—[G. J. GUTHRIE, Esq., in a lecture recently delivered before the Medical Society of London, draws the following conclusions in regard to the treatment of strictures of the urethra, which, as embodying the experience of this veteran and judicious surgeon, are entitled to great weight:—]

1st. That a hard and elastic, or an intractable stricture is never permanently cured by dilatation, or by the application of caustic, although it may be materially relieved by the regular periodical use of a dilating instrument.

2d. That the division of an old, hardened, or elastic stricture through the perineum is not usually followed by a permanent cure, although it is always attended by immediate relief; the disease being apt to return unless a solid sound or catheter is occasionally passed to prevent it.

3d. That the operation of dividing the perineum and urethra in such cases is sometimes attended by severe hemorrhages, by fever, and is occasionally followed by fistulous openings, giving rise to much inconvenience.

4th. That such division does, in some instances, effect a permanent cure.

5th. That the division of the urethra through the external parts should never be attempted in any portion of it anterior to the bulb, such operation not being necessary; for the narrowest stricture of the pendulous or movable part may always be divided internally with much less comparative danger than by the external incision, inasmuch as the instrument can be guided through this part by the finger and thumb of the left hand of the surgeon with a certainty almost unerring.

6th. That the stricture considered by all surgeons as the most important and difficult of cure—viz., at the termination of the bulbous portion of the urethra—may always be divided, when impassable, by a *straight* instrument, and in general more easily than by a *curved* one; the use of which is founded on the erroneous belief that the stricture is situated in the membranous part of the urethra, instead of being, as it is, anterior to it.

7th. That the division of a stricture should, if possible, be effected by an instrument passed through it, and cutting from behind forwards, rather than from before backwards, although a combination of both methods will frequently be necessary to insure success.

8th. That the division of a stricture by these means will not always insure a permanent cure if more than the mucous membrane is implicated, unless such parts be divided also.

9th. That in cases of intractable stricture, the mucous membrane, the inner layer of involuntary muscle, and the elastic tissue external to it, should be divided, when the operation is done from within, but not the outer layer of muscular fibres, which should remain as a barrier between the stream of urine and the common integuments of the external parts—an accuracy of division not always to be attained: whence, perhaps, the difficulty of effecting a permanent cure.

10th. That when a permanent cure is effected in these cases, the divided elastic wall of the urethra is not re united by a structure exactly similar to itself, but by common areolar tissue, rendering the part more dilatable under the pressure of the stream of urine; the formation of which dilatation can be aided during the progress of the cure by pressing on the divided part with the point of a solid instrument passed daily for the purpose of preventing, if possible, that contraction which always takes place during the process of cicatrization; a proceeding which cannot be advantageously adopted when the parts are divided through the perineum, lest it should encourage the formation of a fistulous opening, to which there is always a tendency.

11th. That in cases of intractable stricture accompanied by one or more fistulous openings in the perineum, in *young persons*, or of middle age, the operation through the external parts, or along the urethra, may be resorted to at the pleasure of the surgeon with an equal chance of success, provided the division of the obstruction or bank preventing the free passage of the urine be effectually divided, the *sine qua non* of the operation.

12th. That the operation within the urethra should always be preferred in *elderly* persons, particularly if somewhat stout or fat, as less likely to create

severe constitutional disturbance; and if this operation should fail from any cause, it by no means interferes with the due performance of the other through the perineum, which in serious cases then becomes imperative, as the last resource capable of giving relief.—*Lancet*, June 7, 1851.

32. *Four Cases of Ovariectomy*.—Dr. ELKINGTON communicated to the Birmingham Pathological Society four cases in which ovariectomy had been performed, twice successfully, and the others with a fatal result, and exhibited the specimens.

CASE I.—Was a fine specimen of fibrous tumour, the size of a large cocoa-nut, which had been developed in the folds of the peritoneum, and was accompanied by ascites. The following is a brief sketch of the history of the case:—

Mary Boyce, aged 37, mother of two children, became an out-patient of the Lying-in Hospital September 10, 1845. In 1843 she discovered a tumour, the size of a large hen's egg, in the right iliac region. The swelling gradually increased, and at the time of her application she was nearly as large as a pregnant woman at her full period.

December 11. She measures from the scrobiculus cordis to the pubes twenty-eight inches; from the umbilicus to the pubes fifteen inches; around the body at the epigastrium thirty-four inches; around the body at the umbilicus fifty-three inches; and midway between the umbilicus and pubes fifty-four inches; fluctuation is very distinct; dullness on percussion over the whole lower part of the abdomen; on pressing the fingers suddenly upon the right side, the ends strike against a solid mass; her health is good, but she suffers much inconvenience from the swelling and distension; the uterus is healthy, and can be moved freely in every direction with the uterine sound; there is prolapsus of the posterior wall of the vagina. About the end of December, she became so much distressed by the increased size of the swelling, that it was considered necessary to tap her. Thirty quarts of ascitic fluid were drawn off. After the operation, the solid tumour was found to be very movable, and apparently free from adhesions. It was supposed to be a fibrous tumour of the ovary. She rapidly increased in size again, and was obliged, in about six weeks, to be tapped a second time. This afforded her relief only for a short time, and she was obliged to have recourse to the operation nearly every month. At length she suffered so much, and became so very urgent to have the tumour removed, that it was decided, in consultation with two or three medical friends, to make the attempt.

The operation was performed in July, 1846, in the presence of Mr. Southam, of Manchester, Dr. Bell Fletcher, and many other friends. An exploratory incision was first made, the fluid evacuated, and as there appeared on introducing the finger to be no adhesions in the immediate neighbourhood of the incision, it was enlarged to the extent of five or six inches, so as fully to expose the tumour and its attachments. It was then found that it had contracted adhesions at the lower part of the fundus of the bladder, to the fore-part of the fundus of the uterus, and to the parietes of the abdomen immediately above the pubes, also above and behind to the intestines. These adhesions were considered of such a serious character as to preclude the possibility of completing the operation; consequently, the wound was carefully closed, and the patient put into bed. She died, on the fourth day, of peritonitis.

This case illustrates the difficulty of diagnosis as to the presence of adhesions. It has been stated that the tumour was very movable in all directions, and that the uterus was also readily moved from side to side with the uterine sound. This is readily explained. The adhesions were very long and loose, so as not to confine or interfere with the motions of the tumour or of the uterus.

CASE II.—A cast of a large ovarian tumour of the multilocular kind, removed by operation. The tumour weighed fifteen pounds.

The patient, Mrs. L., consulted me October 6th, 1847. She stated she was 46 years of age, had been married twenty-five years, and had had five children. In 1830, she first perceived a tumour in the right iliac region; it remained stationary nearly five years. She had two children after its first appearance. In 1838 she had a severe illness, which continued some months. On recovering from this illness, the tumour was much diminished in size, and remained so

for six years; it then began to increase, and during the last two years has grown rapidly. On making an examination, I found the tumour occupying the lower half of the abdomen, and extending a little above the umbilicus, which was bulging out. The tumour appeared to be divided into two portions. There is fluctuation in the tumour, but it is felt more distinctly in some parts than in others. The swelling extended from the crista of one ilium to the crista of the other, resting against the pubes, and pressing upon the bladder. Percussion dull over the whole surface of the tumour, eliciting a clear sound in the lumbar regions. The integuments were tight, and not movable over the tumour.

Examination per Vaginem.—The uterus was situated high up, the os pushed forwards, no enlargement of the uterus. The sound passed to the extent of two inches and a quarter only. The uterus movable in every direction, but not freely so. Owing to the tumour being situated so low down, and pressing against the pubes, the fundus uteri cannot be traced externally.

Diagnosis.—Ovarian multilocular tumour of the right side, probably adherent to the parietes. The uterus healthy, but its cavity shortened by the pressure of the tumour.

I saw her again in February, 1848. She was much larger, and constantly suffering from pain and sickness, which continued to harass her till the beginning of May. She was then relieved from these distressing symptoms, but suffered so much from the increase of size, and from the difficulty of breathing, that she begged earnestly to have the tumour removed. I explained to her that it was an unfavourable case for an operation, and that we should probably find adhesions which would not only increase the difficulties of the operation, but materially lessen the chances of success. She declared that she would willingly incur the risk, and so anxiously entreated us to operate, that I consented on condition that Dr. Clay of Manchester, who was about to visit Birmingham, would give me the benefit of his great experience in such cases, and should approve of the measure. Dr. C. thought there were adhesions, but that it was a case in which we should be quite justified in operating. The operation was performed July 18th, 1848, in the presence of Dr. Clay, Dr. B. Fletcher, Dr. Mackay, and several other medical friends. The tumour was connected by extensive adhesions to the parietes at the fore and lower part of the abdomen, and to the edge of the omentum, which was spread out on the upper edge of the tumour. It was very vascular, and supplied by several vessels, which passed from the lower edge of the omentum to the surface of the tumour. Several vessels were secured. Upon the anterior surface of the tumour there was a deep groove passing directly across its centre, which caused the appearance of two tumours. The patient died 36 hours after the operation, apparently from the shock.

CASE III.—A large ovarian multilocular tumour, which weighed at the time of its removal nearly forty-five pounds. The following is a short history of the case:—

Mrs. Moore, Walsall, consulted me June, 1848. She says she is 31 years of age, a dressmaker, married 15 months. She began to menstruate at 17; continued regular and in good health till about two months before she was married. She was then "unwell" every week or two, and had a copious discharge. A few weeks before her marriage she had frequently slight pain in the right side. About three months after marriage she began to increase in size, and after another month the swelling increased rapidly. The swelling first appeared on the left side. She was supposed to be pregnant. She lies down on the left side. Has prolapsus uteri. Is as large as if she were in the last month of pregnancy. The tumour is very movable, irregular, and nodulated. There is indistinct fluctuation, varying in its character at different points.

Examination per Vaginem.—After replacing the uterus, which was prolapsed, there could be felt no enlargement of that organ; the uterine sound showed that the length of the cavity was natural, and that the uterus was movable in every direction. She menstruates regularly. No enlargement of the breasts. With the stethoscope no bruit to be heard in any part of the tumour.

Diagnosis.—Disease of the left ovary of the multilocular form.

She continued to increase in size. In January, 1849, she measured 45 inches

round her; at this time she began to suffer very much from the great size and dragging of the tumour. Her breathing, too, was much embarrassed.

She was tapped on the 28th of February; a quart of thick gelatinous fluid was drawn off, slowly, and with difficulty; it then ceased. A second cyst was tapped, and altogether about five gallons of fluid drawn off, but the size of the tumour did not appear to be reduced more than one-half. In a month she was as large as ever. She now became very anxious to have the tumour removed, and as it seemed to be a favourable case for extirpation, and as there appeared no chance of tapping affording more than very partial and temporary relief, it was decided that we should have recourse to ovariectomy. The operation was performed on April 3d, in the presence of Dr. Clay, of Manchester; Mr. Fletcher, Walsall; Mr. Dehanc, Wolverhampton; and several other medical friends. The tumour was so very large that, although the incision was extended to ten or twelve inches, we were obliged to empty one or two of the cysts before we could remove the tumour. Fortunately there were no adhesions of importance. The pedicle was broad, and was tied by a double ligature. The operation occupied about twenty minutes. She scarcely had a bad symptom after, recovered rapidly, and was out of doors in a month. The first ligature came away on the eighteenth, and the second on the twenty-first day. Her recovery was perfect, and she has continued quite well.

In April last (i. e. 1851) she was confined of a fine healthy girl; had an easy labour, and a rapid recovery.

CASE IV.—The next was a beautiful specimen of fibrous tumour of the left ovary, weighing twelve pounds, removed by Mr. Day, of Walsall, from whose report the following short sketch has been taken:—

Mrs. Howard, aged 42, married twenty-one years, has had nine children. About two years and a half since she found an enlargement in the left hypochondrium, which gave her no uneasiness. She consulted Mr. Day about six months afterwards, who found a hard tumour the size of a cream jug, readily movable in every direction, and attached, as he imagined, by a thin pedicle to the left ovary. She afterwards became pregnant, and had a favourable labour. After delivery, Mr. Day made an examination, and found that the tumour was double the size it was before pregnancy, but still movable in every direction, and apparently quite free from uterine adhesion. She suckled her child twelve months. She gradually increased in size. In June, 1850, her health began to suffer, and she was obliged to wean the child. The swelling increased to such an extent that it became necessary to tap her on August 30th, when three gallons of fluid were drawn off. She refilled rapidly, and in one month was larger than before the operation. At this time Mr. Day says, "Her situation was truly deplorable, being unable to remain in either the upright or recumbent position without excruciating misery, from dyspnoea and severe pain in the region of the liver and heart. But a very small quantity of urine was passed in the twenty-four hours. Diarrhoea was a distressing and constant symptom. She expressed herself suffering intolerable agony, and prayed for the operation to be performed, stating that otherwise she felt sure she must speedily die. Mr. Day operated September 26, 1850. He first drew off five gallons of ascitic fluid with the trocar; then passed a director through the opening made by the trocar, and laid open the abdominal cavity to the extent of five inches, and having ascertained that the tumour was free from adhesions, he continued the incision upwards, making use of his fingers instead of a director, to within a short distance of the ensiform cartilage. He also extended the incision below nearly to the pubes. The tumour being then completely brought into view, was found to be attached by a broad but thin pedicle, about three inches in width, to the left broad ligament of the uterus. The pedicle was secured by a double ligature, and divided close to the tumour. The operation was concluded and the patient in bed in fifteen minutes. The first ligature came away on the twelfth, and the second was removed on the fifteenth day. It was followed by a small quantity of discharge, which had the appearance and smell of feculent matter, but the discharge soon ceased. Her recovery was slow and for some time doubtful. She suffered much from diarrhoea, sickness, and an aphthous con-

dition of the mouth and fauces. She was able to walk in the garden on the 31st of October, and from that time gradually recovered her health and strength. *Provincial Medical and Surgical Journal*, Aug. 6th, 1851.

33. *Case of Ovariectomy successfully performed.* By JOHN BEALES, M.R.C.S. ("Proceedings" of Royal Med. and Chirurg. Soc., June 24, 1851).—In the early part of September, 1850, the author was consulted by a woman, aged thirty, unmarried, for an enlargement of her abdomen, which she had first noticed on the left side in the previous December. Latterly she had suffered from loss of appetite, loss of strength, and wasting of the legs and arms. The author found an ovarian tumour, hard to the touch, in the left iliac region and left hypochondrium, but soft and fluctuating on the opposite side, evidently in two distinct sacs, movable, and free from tenderness; and he was induced to recommend its removal. The operation was performed on the 4th of December, under the influence of chloroform. The incision was ten inches in length, extending from the scrobiculus to the pubes. Two cysts were punctured, and their contents removed, before the tumour could be removed from its cavity; the pedicle was tied by means of a double ligature passed through its base, and the tumour was then separated as near as possible to it. The uterus and right ovary were healthy. Everything went on favourably after the operation. On the 15th she was able to walk about the room. On the 25th the ligature came away. The tumour was three feet two inches in its largest circumference, and two feet one and a half inch in its smallest; it weighed twenty-five pounds; it was multilocular, marked on the surface by bands of white fibrous tissue corresponding with the septa of the cysts. The author then gives a description of the walls of the cysts. The cysts varied very much in size, and in the density and tenacity of their contents; in the smaller ones the fluid was clearer and thinner. The average specific gravity was 1010, but the fluid contained a very large quantity of albumen. The total quantity of fluid was from twenty-one to twenty-three pints.

[A full detail of this case has been published in the *Prov. Med. and Surg. Journ.*, July 23d, 1851.]

34. *An Ovary removed by mistake for a Labial Cyst.*—At one of the late meetings of the Surgical Society of Paris, M. GUERSANT, Chief Surgeon to the Hospital for Children, brought forward a case in which an error in diagnosis was committed, and which ended fatally. The patient was a little girl, eleven years of age, who, ever since she was one year old, had in the left labium a small painless tumour. Of late, however, this tumour had become troublesome, and interfered with walking. When examined, it was found of the size of a small walnut, situated in the thickness of the labium, and extremely movable, so much so, that it could be pushed downwards to the most posterior portion of the labium, and upwards as far as the external ring. It was, however, impossible to press the tumour into the ring, which latter presented no abnormal dilatation. The tumour had a great deal of analogy with a testicle. M. Guersant looked upon it as a cyst, and resolved to remove it. A longitudinal incision brought into view a membrane much resembling tunica vaginalis, and having the aspect of the peritoneum. Through this membrane an ovoid body was observed, which was no other than the ovary; it was attached to a pedicle formed by the Fallopian tube, which ran into the abdomen through the inguinal canal. M. Guersant placed a ligature on the pedicle, and cut out the ovary. Acute peritonitis occurred the very next day, and the patient died on the third day after the operation. M. Morel mentioned during the discussion that he had had an opportunity of seeing a tumour of the same kind in the labium, and formed by the ovary; no modification of size or sensibility was noticed to occur at the menstrual period. M. Lenoir stated that Pott has related a case in which the two ovaries were removed by an error in circumstances analogous to those of M. Guersant's patient.—*Prov. Med. and Surg. Journ.*, Aug. 6th, 1851.

35. *Serious Hemorrhage following Excision of the Tonsils.*—The following instructive case forms the subject of a memoir by M. CHAISSAIGNAC (*Archives Générales*, Mai).

The patient, a female, aged 21, was the subject of enlarged tonsils, one of which had been removed eight days before by M. Sandouville. The operation had been quite successful in its immediate results. The author was summoned in consequence of an uncontrollable spitting of blood. On looking into the throat for the purpose of discovering the exact seat of the hemorrhage, M. Chassaing found that it proceeded from the bottom of a concavity left by the excised tonsil.

The patient had been for some time constantly spitting blood, and had also vomited a large quantity. The pulse was small, the extremities cold, and altogether she was in imminent danger. Many means had been adopted without success, such as ice externally, and styptics of various kinds internally.

The first proceeding adopted by the author was to make pressure on the bleeding surface with lint dipped in lemon-juice. This controlled the bleeding for a time, but after he had left it returned with equal intensity. He now intended to apply the actual cautery, but before resorting to this it occurred to him to try keeping up pressure on the tonsils with lumps of ice. This was done with the aid of forceps, and was completely and permanently successful.—*Prov. Med. and Surg. Journ.*, July 23, 1851.

36. *Diaphragmatic Hernia of the Stomach, Spleen, and Colon.*—This curious case is published in the *Revue Médico-Chirurgicale*, Juin, 1851. The patient, aged 59, was admitted into the Hôtel Dieu of Nantes, in June, 1850, complaining of pain in the epigastric region, constant vomiting, cough, and purulent expectoration. He died at the end of three weeks. After death the stomach, omentum, spleen, and a portion of the colon, were found in the thorax, having passed through an opening to the left of the pillars of the diaphragm; the opening had smooth edges, and did not exhibit any appearance of laceration. There was no trace of inflammation, either in vascularity or adhesion, so that the inference was that the hernia was congenital, and that the vomiting towards the close of life was in some way connected with the state of the lungs, which were full of phthisical excavations.

37. *Excision of the Astragalus, successfully performed for Fracture and Dislocation of that Bone.*—Although the history of fracture with dislocation of the astragalus, requiring the extraction of the bone, has been succinctly written, there are comparatively but few cases on record, so that the following instance by M. THORE (*Archiv. Gênerales*, Mai) is not without value:—

A young man, working in a stone quarry, had his right foot crushed by a fall of stones and earth. When first visited, the foot and leg were enormously swollen, so that it was difficult to ascertain the nature of the injury. The foot was, therefore, enveloped in poultices. Five days subsequently a gangrenous odour was perceptible, and bullæ appeared filled with fetid sanies. At the external aspect of the foot the skin was sloughing, and a portion of the astragalus projected, and was movable in all directions.

Two days after the author decided to extract the bone. After enlarging the wound, the bone was seized in strong forceps, and the ligamentous structures being divided it was readily extracted, leaving a large and deep excavation.

The report five days after the operation is, that the appearance of the limb is much improved, the gangrene diminishing, and cicatrization commencing in certain portions of the wound. Several splinters were extracted, and phlegmonous erysipelas ensued, requiring several incisions for the purpose of evacuating pus; but on the subsidence of this the patient made rapid progress.

An examination of the limb was made at the expiration of the year, when the following were the appearances: Above and immediately behind the external malleolus there was a deep semicircular cicatrix. There was no trace of callus either on the tibia or fibula. The external malleolus is more prominent than the other. The concavity of the sole of the foot was little changed. The foot, which was for a long time movable, in every direction, was at this time quite ankylosed. The patient could walk and even dance without pain, and with facility.